WORLD TRADE ISSUE . . . . . Next Week

AIR CONDITIONING HEATING & REFRIGERATION NEWS
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✓ INSIDE THIS ISSUE

FALL-OUT SHELTER and RECREATION FACILITY combined in Idaho experiment. Conventional heating, ventilating system used 2
WHOLESALER'S GROWTH will be dependent upon better management, better planning, and better administration, consultant tells ARW 6
BUSINESS GOOD and WILL GET BETTER, distributor's salesmen told at one-day "brush-up" meeting 18
TRANSPORT REFRIGERATION 11
AUGUST CLIMATOLOGICAL EVALUATION CHART 15
EDITORIAL 12
WHAT'S NEW 14
SERVICE BULLETINS 18

Gibson Names Farrell to Room Unit Sales Post

GREENVILLE, Mich.—James M. Farrell, veteran appliance and air conditioner executive, is the new vice president in charge of room air conditioner and dehumidifier sales for Gibson Refrigerator Sales Corp., subsidiary of Hupp Corp., it was announced by W. C. Conley, president.

J. M. Farrell

Farrell was formerly product manager, room air conditioners,

(Continued on Back Page, Col. 1)

Engineer-Contractor Group Works To Improve Relations

SPRINGFIELD, Ill. — A recent meeting between representatives of the Consulting Engineers Council (CEC) and the Council of Mechanical Specialty Contracting Industries (CMSCI) has paved the way for continued improvement of relations between engineers and contractors, the CEC reported.

Among subjects discussed during the all-day meeting were proprietory specifications, separate subcontracts, hold harmless clauses, and specification clarity.

Regarding proprietory specifications, the CEC report stated: "In some areas manufacturers, whose products are specified by name, quote different prices to the various contractors who are bidding on the job. The net result is that the manufacturer has considerable say in who is low bidder."

On the matter of separate subcontracts, it was noted that since CEC and CMSCI each has members who favor, as well as oppose, the separate contract philosophy, it was agreed to leave this question to the discretion of individual members at the local levels.

CMSCI is surveying its membership on the matter of hold harmless clauses. Early replies indicate, it was reported, that this form of insurance is considered an unjustified expense and that it is another factor in the ever-increasing cost of con-

(Continued on Page 19, Col. 1)

RACCA Names J. L. Koach Executive Dir.

CHICAGO — Appointment of Joseph L. Koach as executive director of the Refrigeration & Air Conditioning Contractors Assn. (RACCA National), effective Aug. 1, has been announced by Walter McCarty, RACCA president.

J. L. Koach

At the same time, McCarty announced that association headquarters will be moved from Washington, D. C. to Chicago.

Formerly administrative assistant of the Linen Supply Assn. of America, Koach has a background of 13 years in organization management, including seven years as a national association executive.

He has been assistant to the

(Continued on Back Page, Col. 1)

June Room Unit Sales Up In 4 Areas

DETROIT — Distributor shipments of room air conditioners in June were up 39.6% in the St. Louis area and 30% in the Cleveland area, according to utility and association reports.

In the territory served by Kansas Gas & Electric Co., Wichita, dealer sales of room air conditioners were up slightly from a year earlier.

June room unit sales were well ahead of the previous June in the territory served by Florida Power Corp.

Union Electric Co., St. Louis, reported that 11 appliance distributors shipped 3,939 air conditioners in its service area in June, compared to 2,821 a year earlier. For the first half of 1961, shipments totaled 11,737, up 25.9% from the 9,320 units

(Continued on Page 19, Col. 3)

Inside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

End of the World?

Ours is not the only generation threatened by an imminent End of the World. Historically, many predecessor generations have been so afflicted.

Everybody expected Judgment Day when Halley's Comet appeared in 1910. And before that, it was freely predicted that the End of the World was "nigh" in 1876.

Many New Englanders sat on hillsides waiting for the Star of Bethlehem to reappear in July of 1780.

'Way back in 1662 Samuel Pepys recorded in his diary (for Nov. 25):

"Great talk among people how some of the Fanatiques do say that the end of the world is at hand, and that next Tuesday is to be the day. Against which, whenever it shall be, good God fit us all!"

Somehow, we believe the world won't "end" for billions of years yet, no matter what dire predictions are made at any given time.

Insignificant Past: Tremendous Future

Although our Earth came into being about five billion years ago, primitive life on this planet did not appear until three billion years later.

By comparison civilization began only one tick of the clock ago.

Man's first tool was fashioned "yesterday," on the Earth's calendar. Automatic factories and space vehicles have just arrived.

(Continued on Page 8, Col. 1)

In the News This Week

See Sharp Rise In Complete Hospital Cooling

SYRACUSE, N. Y.—A sharp rise in the complete air conditioning of hospitals was indicated with a report from Carrier Air Conditioning Co. that its sales of large equipment for hospital use have doubled during the first half of this year compared to the same period last year.

Russell Gray, president of the company, said hospitals now account for nearly 15% of Carrier's large equipment sales, trailing only the office building and industrial markets for equipment of this type. This represents an increase from about 7% at this time last year, he said.

"The trend today is to air condition patient rooms and wards as well as such critical areas as operating and delivery rooms," Gray said.

He cited two reasons for the recent growth in sales—a boom in hospital construction to cope with an expanding population, and a greater awareness by hospital administrators and directors of the benefits of year-round air conditioning regardless of geography. He said Canada is experiencing a similar surge.

"A recent survey of 17 Pittsburgh hospitals showed the administrators all agreed that air conditioning increases staff efficiency and reduces housekeeping," says Gray. "Nearly two-thirds said it also aids patient recovery, and can be especially helpful during treatment of heart and respiratory ailments and allergy problems."

●

Air Conditioning Keeps 'em 'Down on the Desert'

PHOENIX, Ariz.—Air conditioning the Valley of the Sun has done much to stabilize the year-round population of the greater Phoenix area, Charles E. Hoover told members of the Phoenix Exchange club.

The advertising director of the *Republic* and *Gazette* newspapers, speaking on "Statistical Gold for the Phoenix Businessman," noted only 30% of the Valley's population is away during the peak vacation month of August and only 25% is absent during July.

"It used to be that Phoenix merchants would close down for the summer, with signs on their doors saying "See you after Labor Day," he stated.

Hoover's talk was based on the statistical information compiled each year by the *Republic* and *Gazette's* Consumer Analysis Survey.

●

Westinghouse Adds Electric Home Furnace

STAUNTON, Va.—An electric furnace has been added to the product line of residential heating and cooling equipment produced by Westinghouse Electric Corp.'s air conditioning division, it was announced by Joseph Cerny, residential products manager for the division.

"Automatically controlled by a thermostat, the heating elements in the unit 'cut in' under step control," Cerny said. "Each heating element has its own limit control and shuts itself off if overheating results."

The forced-air furnace is available in two cabinet sizes. They have a total of six different output ratings which range from 34,000 to 119,000 Btuh. Blowers are generously sized to handle cooling requirements at low sound levels, it was stated. The new furnaces are "dimensionally small, permitting installation in all kinds of applications, and as part of the Westinghouse Total Comfort System—heating, cooling, cleaning, humidity control."

Packaged Heat Pumps Cut Mall Center Costs

BIRMINGHAM, Ala. — Eastwood Mall Shopping Center in Birmingham, with what is termed the world's largest installation of packaged heat pumps (in terms of capacity) in a commercial building, signals a new trend in shopping center design: large scale application of factory assembled heat pumps within a single structure.

The $4 million center employs 47 Typhoon water source heat pumps with a cooling capacity of 1,015 tons in air conditioning and heating both the stores and the more than 50,000 sq ft of sidewalks linking the stores. Built at a cost of $11 per square foot, Eastwood, the third largest enclosed mall center in the country, houses 43 stores under a single roof covering 7.5 acres. The center includes a bowling alley supplied with 90 tons of air conditioning also handled by Typhoon heat pumps.

At Eastwood, architect Willard Thorsen and engineer Lewis Freedland took advantage of the flexibility and economy of factory assembled packaged heat pumps to simplify the design and installation problems for 43 separate stores and to resolve the luxury versus efficiency dilemma faced by center developers and tenant store managements.

Packaged heat pumps, it is pointed out, are breaking the equipment cost barrier in centers like Eastwood. Factory built units can be installed usually for 70% of the cost of a built-up central system. Now the availability of large tonnage

(Continued on Page 16, Col. 1)

Fedders Names Skier Ad, Merchandising Mgr.

MASPETH, N. Y. — Norman Skier has been appointed to the newly-created position of advertising and merchandising manager for Fedders Corp., according to U. V. Muscio, executive vice president.

N. Skier

Skier has been in the radio-TV and appliance industries since 1946 in various advertising and merchandising capacities.

At Fedders, Skier will direct the firm's advertising, promotional, and merchandising activities, maintaining close liaison with the company's distributors.

Harry Sloan Dies, With Vilter 41 Yrs.

MILWAUKEE—Harry Sloan, 91, advisory engineer with Vilter Mfg. Corp. for 41 years and a past president of the American Society of Refrigerating Engineers (now ASHRAE), died recently at the Country Haven rest home, Brookfield.

Sloan joined Vilter in 1914. In 1955, he was injured in an automobile accident, ending his active employment. However, he continued to advise the firm by calling from his home whenever he had an idea for improving refrigeration equipment. He retired officially in 1959.

Holder of numerous patents in the refrigeration field, Sloan helped set up specifications for coolers for army camps during World War I.

Fall-Out Shelter-Recreation Facility

Trial Project Has Conventional Heating, Ventilating System

INSTALLATION CREWS of E. W. Little Sheet Metal, Boise, Idaho, set Drayer-Hanson air mover into position at Boise, Idaho community Fall-Out Shelter. Assisting are (l. to r.): Clayton Cousins, Mechanical Equipment & Engineering Co., and Carl Everett, vice president of air conditioning contracting firm, E. W. Little.

BOISE, Ida. — Something is being done about civilian protection here, according to Clayton Cousins of Mechanical Equipment & Engineering Co.

His firm is now handling the heating and ventilating phase of a unique government-sponsored community fall-out shelter.

The project, recently outfitted with a pair of Drayer-Hanson air-moving units for heating and ventilating, will serve a dual purpose. The totally underground structure, basically designed as a fall-out shelter, will also serve the community as a recreation facility.

The joint venture between subdivider and U.S. Dept. of Civil Defense, is stated to be approximately 80% government-financed. Location is Highland Subdivision, a fast-growing area two miles from metropolitan Boise.

The two-story shelter is set into a hillside; is concrete block construction with concrete pumice block partitions. Dimension is approximately 80 ft by 150 ft. A blast radiation protection entrance is the only thing visible from the surface.

The experimental facility (capable of providing protection for some 150 residents of Highland Subdivision) is expected to set a format for similar government-participation projects throughout the country. The project reportedly is the only one of its kind in the States.

NEAR LAUNCHING SITE

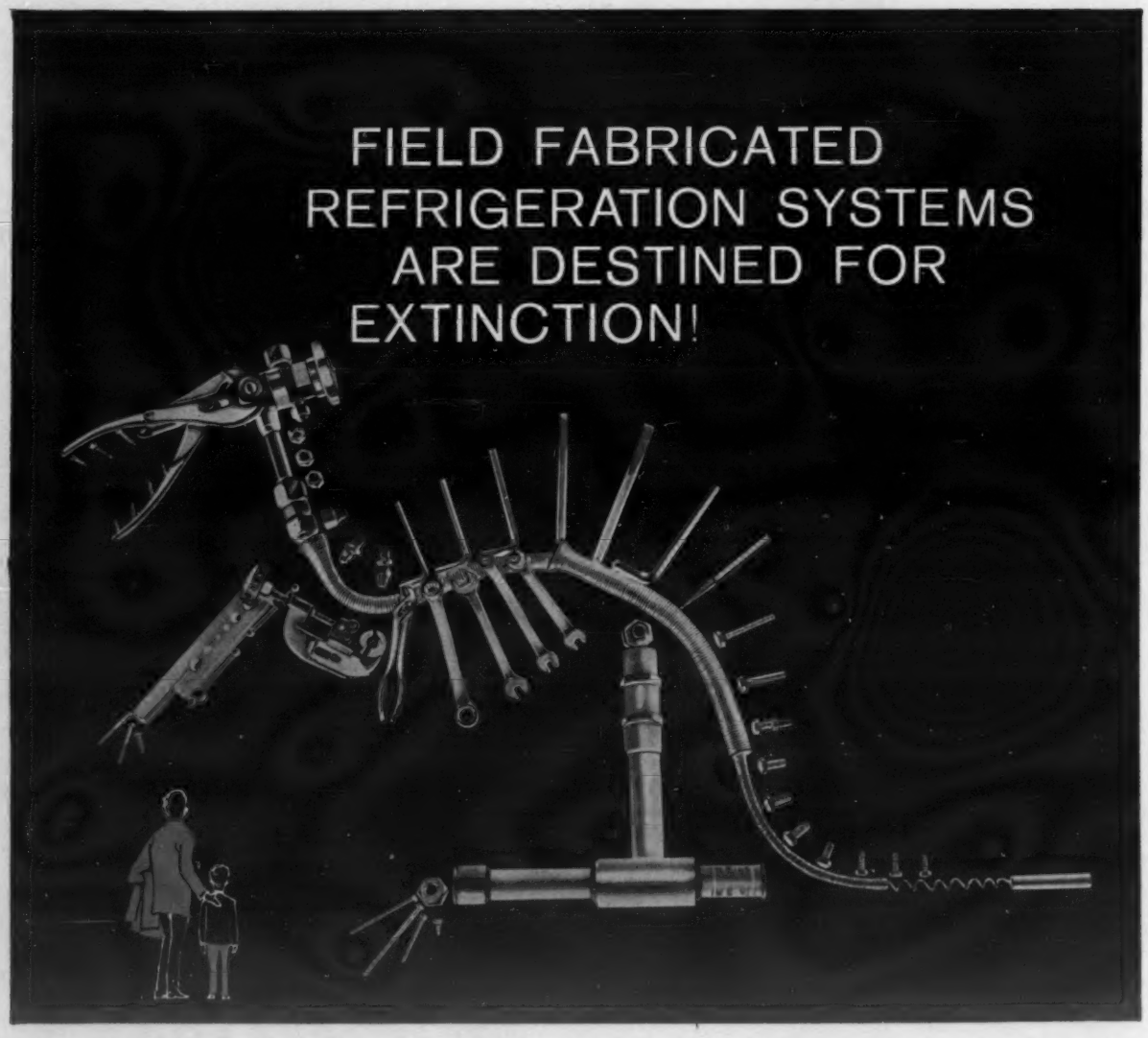
This community is within 40 miles of Mountain Air Force Base, a Titan launch facility and bomber base.

The underground building is being outfitted with kitchen, hospital facilities, and, for immediate use, dance and other recreational areas. It is expected to storehouse food, as well.

The air-moving system, Cousins said, is a conventional heating and ventilating system utilizing a single Drayer-Hanson FAM-144 unit, ceiling suspended in each of the two floors and duct-connected to matching "Tuckaire" gas-fired furnace, having 25,000 Btu capacity.

Drayer-Hanson has provided this equipment with 3-hp high-speed motor; 1½-hp. low speed, and 3-hp high speed—also, combination filter and mixing box with "throwaway" filters.

Project architect was Edger Jensen, AIA; engineer, Glen Beuttner; air conditioning contractor, E. W. Little Sheet Metal Co., all Boise. Mechanical Equipment & Engineering, Drayer's sales representative in Idaho, finalized transactions for the West Coast manufacturer.



NEW KRAMER THERMOBANK-COMPRESSOR *Systems make field-fabrication as obsolete as dinosaurs and open a new era of opportunity in refrigeration.*

Gone is expensive, time-consuming and inefficient field-fabrication of refrigeration systems and with it your major headaches —shortage of skilled manpower and uncertain costs! Kramer's THERMOBANK-COMPRESSOR SYSTEMS are complete systems (high side and low side), factory engineered, instrumented, assembled, tested and run-in. For outdoor installations, they arrive on the job in all-weather aluminum housings, and "Winterstated" for year-'round automatic operation.

Requiring only connection of refrigerant lines and electrical service, they permit you to handle a much greater volume of business with your present skilled staff. Gone are costly delays for components; you get a complete Kramer System with a single order eliminating reams of paperwork. Kramer's System rating assures accurate predictable performance. Costs are predictable, too, since errors in assembly or labor and material estimates are obviated.

Your customers get a better buy and a better system incorporating Kramer pioneered features including the unique THERMOBANK re-evaporative defrost with all-season Winterstat control for any size job and any temperature level.

To learn how Kramer THERMOBANK-COMPRESSOR SYSTEMS can brighten your profit picture, request Bulletin C 484A.

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48 YEARS OF CONTINUOUS ACHIEVEMENT IN HEAT TRANSFER

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10 GALLON PRESSURE TYPE

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*To Dealers Only

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SOUND WAVES COOL

the motor windings of new General Electric 8 and 10 ton compressors! Now, G.E. marks another major advance in air conditioning with ACOUSTI-COOL—a dramatic innovation in compressor design. ACOUSTI-COOL actually uses the higher frequency sound waves in the compressor to help cool the motor windings—and longer life, of course, goes hand-in-hand with cooler motors. **New compact 8 and 10 ton units made possible.** This new principle has enabled G.E. to develop 4-cylinder compressors so compact that they'd each fit into a five gallon paint can. And these compressors are the heart of G-E's all-new 8 and 10 ton units—units that open an expanded and profitable market for you in terms of commercial, industrial and large residential installations. Get the complete facts on ACOUSTI-COOL . . . and on the new G-E 8 and 10 ton units. Contact your nearest G-E distributor, or write: General Electric Company, Air Conditioning Department, Tyler, Texas.

GENERAL ELECTRIC

Air Conditioning Dept.
Tyler, Texas

Dunham-Bush Names Peter J. Dalton

WEST HARTFORD, Conn.—The appointment of Peter J. Dalton as manager of sales training for Dunham-Bush, Inc., has been announced by James A. Mulcahey, vice president in charge of sales.

P. J. Dalton

Dalton will immediately assume responsibility for the Dunham-Bush Education Center program, field training, and engineering college liaison.

He formerly was vice president, sales, at Welbilt Air Conditioning & Heating Corp., Air Conditioning, Inc., Ossining, N. Y., and product sales manager for Worthington Corp.

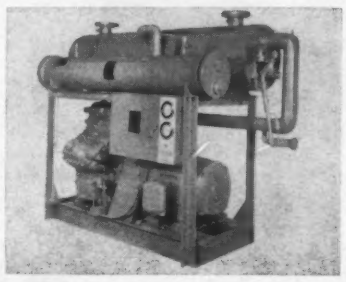
York Introduces Direct Expansion Packaged Liquid Chiller Line

YORK, Pa.—York Corp., subsidiary of Borg-Warner Corp., has recently introduced a new line of packaged liquid chilling machines.

Called the "3DD" Series, these new chillers are of the direct expansion type and are available in 50, 60, 75, 100, and 125-ton sizes.

"Extremely compact for their capacities, these models are available with the exclusive York 'load minder' that permits continuous, stable operation of the unit even when the load is 10% of peak capacity," the company said. "In addition, they are shipped from the York factory fully wired and piped and have been performance tested.

"Installation is easy since no bolting to the floor is required.



YORK "3DD" Series packaged liquid chillers of the direct expansion type. Models include York "load minder."

These '3DD' chillers are equipped with vibration isolator floor mounts and need only be placed on a level surface.

"Models are also available less condenser for remote water or air-cooled condensing."

NWAHACA Issues Press Clip Sheet On Summer Cooling

CLEVELAND — A press clip sheet which provides consumer information about summer cooling has been distributed to 2,300 newspapers and the trade press by the National Warm Air Heating & Air Conditioning Association.

It also has been sent to all members of the association with suggestions that it be offered to local media. Total distribution amounted to 8,000 copies.

Seven articles and 19 random "shorts," all designed to help "sell" summer cooling, comprise the press sheet. Early indications are that home section editors throughout the country are publishing these articles, NWAHACA said.

Dealer-contractors who want extra copies of the press sheet for use in their own sales promotion programs, can obtain a limited number by writing to: Public Relations Dept., National Warm Air Heating & Air Conditioning Association, 640 Engineers Bldg., Cleveland 14, Ohio.

Silver Shield Dealers Use Small Seals on Bills, Letters, Etc.

CLEVELAND—Postage stamp size seals are now in use by Silver Shield dealer-contractors throughout the nation for the promotion of Silver Shield Certified heating and cooling systems, according to the National Warm Air Heating & Air Conditioning Assn.

The stickers are recommended for use by dealer-contractors on all letters, promotion pieces, statements, packages, proposals, etc., mailed or hand-delivered to prospects and customers.

Printed in blue and red ink on a silver background, they highlight the Silver Shield slogan—"Tomorrow's Comfort Today"—and effectively tie in a dealer-contractor's business into the newspaper advertisements published by local Indoor Comfort Bureaus, it was pointed out.

Hajoca Purchases Rogers-Ebert Co.

ARDMORE, Pa. — Hajoca Corp. announced that it has taken another step forward in its rebuilding program through the acquisition of the Rogers-Ebert Co., Orange, N. J.

With the purchase of inventory, furniture, and equipment, Hajoca will now service the north New Jersey area through its branch located at Washington and Alden streets.

B. C. Reuter, Jr., district sales manager of Hajoca's New York sales office, has been appointed manager of the Orange branch in addition to his present assignment.

James P. Rogers of Rogers-Ebert Co., will remain with Hajoca in an advisory capacity. Customary to its policy, all former personnel of Rogers-Ebert Co. will be retained by Hajoca, the firm said.

The official opening brought to a total of 24 the number of Hajoca branches.

Porter Purchases National Cornice Works

PITTSBURGH—H. K. Porter Co., Inc., here announced the purchase of the National Cornice Works, Inc., Los Angeles, manufacturer of fans and blowers used for commercial and industrial ventilation, and marketed under the "Master Fan" trademark.

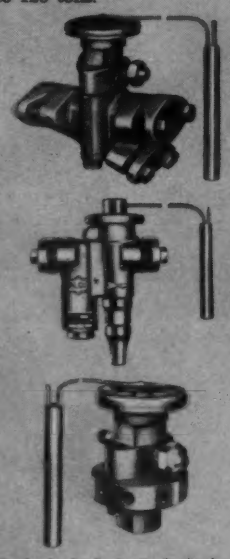
National Cornice Works, nearly half a century old, will be operated as a wholly-owned subsidiary of Porter. Its engineering and sales forces will work closely with those of Porter's Peerless Electric Div. at Warren, Ohio.

National Cornice is also a custom metal fabricator and a producer of several types of school, institutional, and restaurant hot food serving equipment.

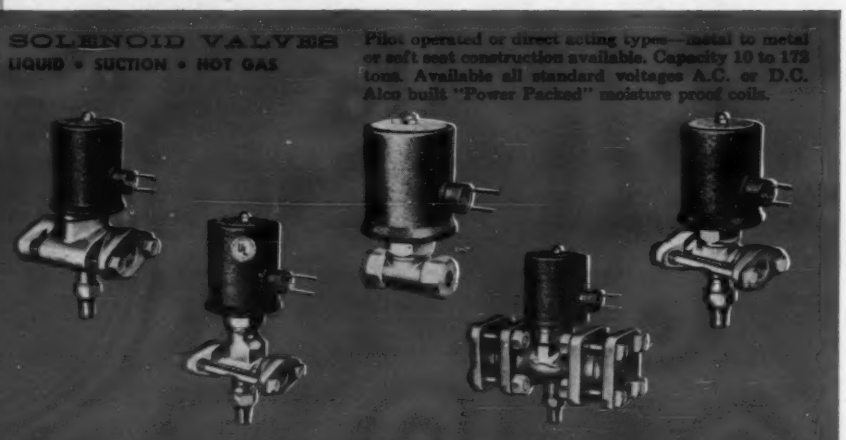
ALCO *the most complete line of Quality Controls for*

AMMONIA REFRIGERATION SYSTEMS

THERMO EXPANSION VALVES
External superheat adjustment—range 2° to 20° F. and 18° to 40° F. Capacity 1 ton to 125 tons.



SOLENOID VALVES
LIQUID • SUCTION • HOT GAS
Pilot operated or direct acting types—metal to metal or soft seat construction available. Capacity 10 to 173 tons. Available all standard voltages A.C. or D.C. Alco built "Power Packed" moisture proof coils.



Explosion proof solenoid valves available.

CONSTANT PRESSURE VALVES
All steel construction. Capacity 0.85 to 60.50 tons. Externally adjustable. Discharge tube prevents frosting and retards erosion of pin and seat.

EVAPORATOR PRESSURE REGULATORS
for constant evaporator pressure or temperature. Operating range 2 lbs. to 70 lbs. PSI. Also available for vacuum range.

REFRIGERANT STRAINERS
Semi-steel and Cast Iron. Straight line connections. Maximum screen areas. Line connections ½" to 2" pipe thread and flanged.

TEMPERATURE PILOT
for control of evaporator temperature. Adjustable range 0° F. to 40° F.

FLOAT SWITCHES and HIGH PRESSURE FLOAT VALVES
Types for all applications. Float Switches—115V. or 230V. A.C. or D.C. 400 lbs. M.O.P. Float Valves—2 to 20 tons. 300 lbs. M.O.P.

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BUY SECURITY • BUY QUALITY • BUY ALCO

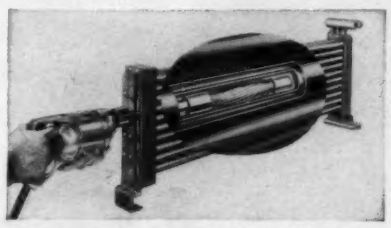
The one complete line of refrigerant controls: Thermostatic Expansion Valves • Refrigerant Distributors • Solenoid Valves Refrigerant Filter-Driers • Suction Line Regulators • Flooded Evaporator Controls and Reversing Valves

8400

"Here's why I always pick H & M water-cooled condensers

...you can clean them safely because you clean them mechanically!

"Time was when I used chemicals to clean out the scale and sludge in my water-cooled refrigeration systems. But soon I found out that the chemicals were doing damage not only to the condensers but the cooling tower and pump, too.



"Now I always buy Halstead & Mitchell Water-Cooled Condensers, because they can be cleaned safely with a simple mechanical tool and an ordinary electric drill. The end plates remove easily to expose the water tubes."

Another good reason to choose H & M condensers: they give more liquid sub-cooling because of the double-tube design and true counterflow of refrigerant and water.

There are five different types, including models for sea water or poor water conditions, in capacities of ⅛ to 25 tons.

Call your parts wholesaler for more information, or write for Bulletin WC-300. Halstead & Mitchell Co., Dept. H-75, Bessemer Building, Pittsburgh 22, Pa.

Water-Cooled Condensers • Air Handlers and Coils • Cooling Towers • Air-Cooled Condensers

Export Representatives: Sobal-Kielmann, Inc., 15 William St., New York 5, N. Y.

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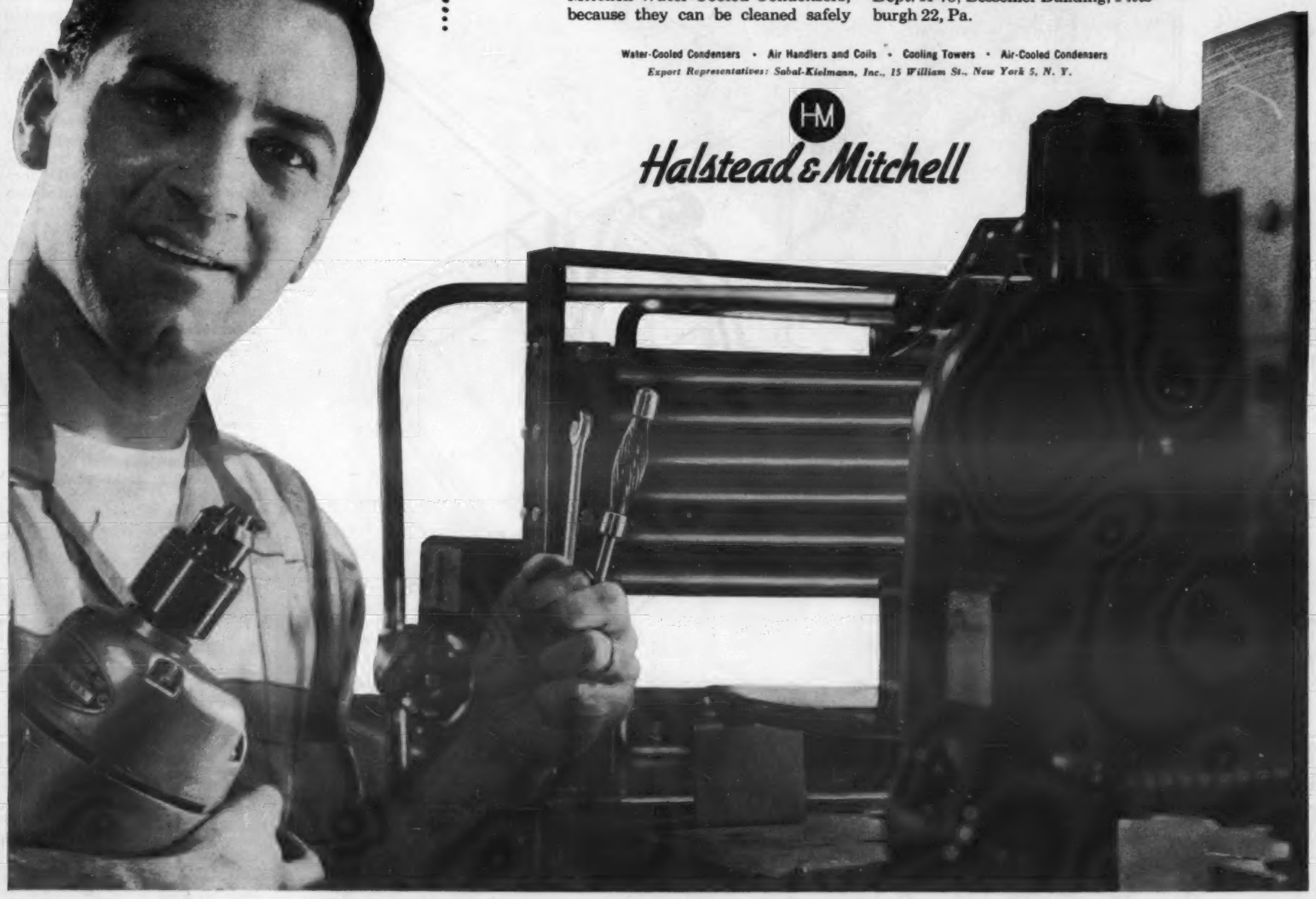


Better Management, Better Planning, Better Administration Vital to Wholesaler's Growth

Part 2

Management is organizing. Organizing is providing the means, through people, to accomplish our plans.

Organizing is the function of providing the necessary people with the proper qualifications to perform the work that will accomplish your plan. By methodically planning your organization you will be able to distribute the work evenly, and will know the abilities necessary for each position.

There are five basic rules of organizing:

1. A person should have only one boss and receive his orders from this boss.

2. A boss should have direct supervision over only as many subordinates as he is able to control.

3. Every individual should have sufficient authority to perform his duties.

4. Assign each function to only one individual at a time.

5. Decisions should be made at the lowest possible level where all the facts are available.

In laying out your organization, you must bear in mind the relationships between the people within one group or department and the other groups or departments, and thereby avoid overlapping of duties. Also, allow for adequate communication in your organization, from the bottom up and from the top down. Keep everyone informed.

Although you must have an organization that allows for the development of capable persons for more responsible positions, you should also remember that you can't bring everyone along. Some truck drivers are going to be truck drivers all of their lives.

Management is delegating. Delegation involves setting the standards for people, selecting the people, telling the people, and motivating the people.

You have to decide in advance what you expect of a given job, before you can properly appraise the performance of the person to whom it has been assigned. And so the time must be taken to write out a description of the job.

Standards should be specific and clear cut, and where responsibility is placed on an individual, adequate authority to perform should be clearly given to him.

Present to each individual in your organization the job to which he has been assigned. Let everyone in the organization know the authority, responsibility, and duties of the other persons. Instruct and train the people in their jobs, or see to it that they are instructed and trained. Make certain that you provide up and down channels of communication.

It is one thing to provide a means for orders being transmitted from you to the proper people, it is another and more difficult thing to get feedback from those who have to carry out the orders. Make sure that your organization has adequate facilities for people to be heard. The people in your organization, sometimes down at the very bottom, know a lot more about what is going on in certain areas than you do sitting at the top.

Create Desire for People To Do Job

Now that everyone knows what he is supposed to be doing, you must create the desire for him to do it. Adequate compensation is important, but survey after survey shows that most important in the average worker's mind is recognition . . . a pat on the back for a job well done. So you must be a leader. You must inspire and stimulate your workers. Wherever possible, compensation should be related to output and adequate incentive for doing a better job should be provided.

Management is controlling. Controlling is broken down into three phases: comparison of results with expectations; consulting with the responsible person to find the reason for variations; and taking corrective action.

First — Comparing results. Periodically we must compare the results of our organization's efforts against the goals we have established. By making this comparison, we can see our weak points. But a word of warning—the plan must be sound if the comparison of results versus plan is going to be meaningful. In making comparisons, take into account the known limitation of your plans.

Second — Consult those responsible. Before you call in your warehouse supervisor and read the riot act to him because his expenses are over your budget, give him an opportunity to study the figures and attempt to explain the reason for the poor results.

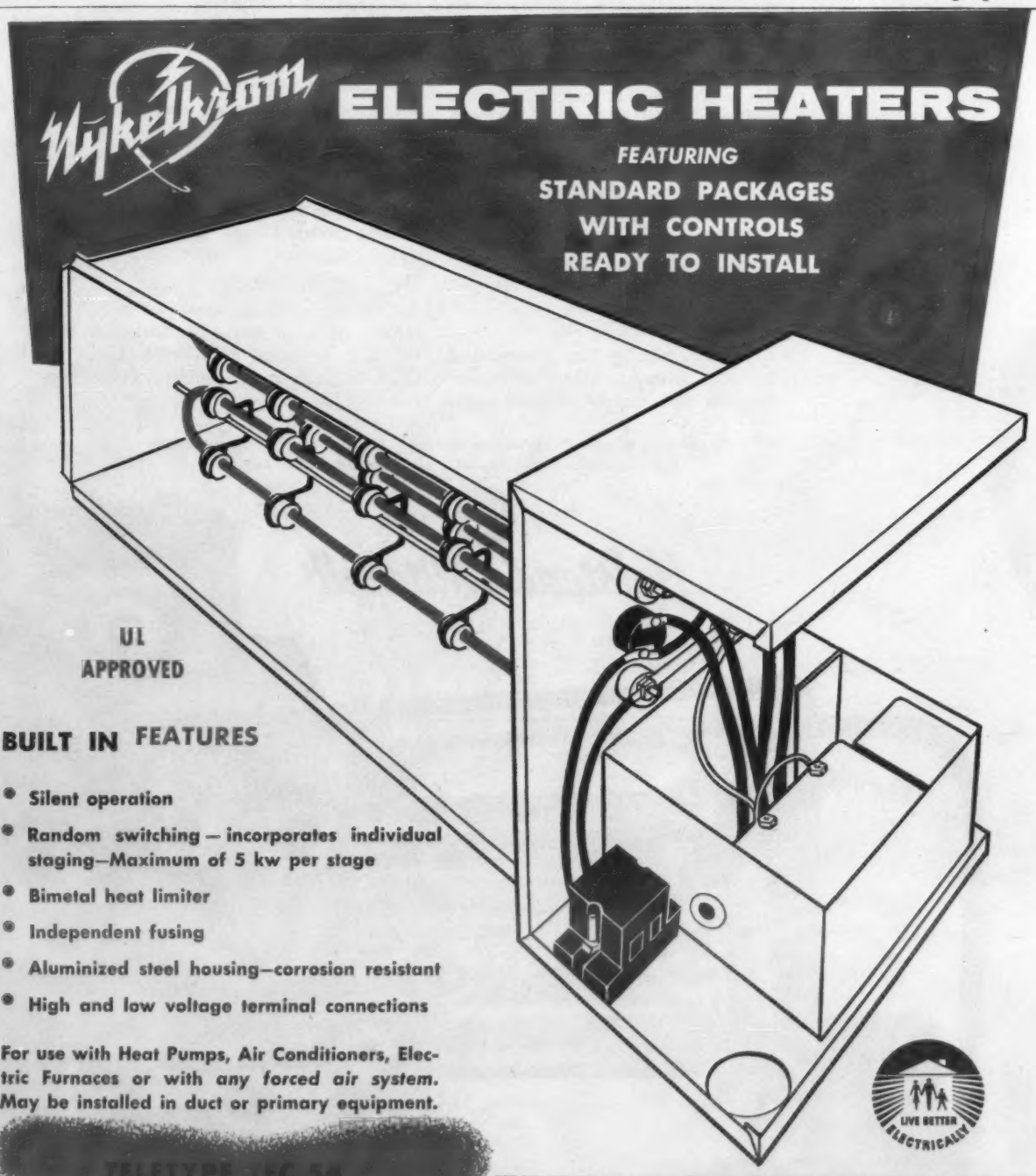
Third—Take corrective action. If you are going to achieve the desired result in your business, you must be ready to take decisive action at a time when your operations are not going as planned. Just as you would with your automobile, so with your organization, you must adjust, repair and replace, and even add a little fuel from time to time.

Leadership Involves Delegation

Leadership involves delegation. It is getting individual and group cooperation to achieve the company's plan. Many managers feel that since they accept the responsibility for their company, they want to make all the decisions and do things for themselves. The following have been given as the reasons for not delegating authority:

1. Because we don't know how.
2. Because we are afraid of looking idle.
3. Because we fear subordinates might fail (won't take a chance).
4. Because we are afraid that subordinates might take over our business.
5. Because we are egotistical and want to feel superior.
6. Because we haven't given it any thought.
7. Because we don't know to whom to delegate.
8. Because the timing isn't right.
9. Because there is no time for training.

The following are the qualities of a true leader: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ELECTRIC HEATERS
FEATURING
STANDARD PACKAGES
WITH CONTROLS
READY TO INSTALL
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The role of the manager of a wholesaling business in developing a more efficient operation currently, and in planning for the future, was outlined in a speech at the Region 5 meeting of Air Conditioning & Refrigeration Wholesalers Association by George C. Webster. Head of an air conditioning wholesaling firm, Webster is also a management consultant, and served as moderator for a forum on management problems at ARW's convention last Fall. (This is the second of two parts.)

1. He will delegate and hold his subordinates responsible.
2. He will give his subordinates enough authority to prove that they are capable or incapable of performance, and he is ready to take corrective action when necessary.
3. He doesn't run a "one-man" company.
4. He is not a grandstand player.
5. He is not out to win a popularity contest—you can't try to please everyone, but you keep your batting average as high as possible.
6. He is calm, doesn't carry troubles on his back which cause his employes to lose confidence in him.
7. He doesn't carry work home.
8. He inspires people to give their best to the company.

Must Watch and Interpret Change

The function of a leader in an organization is to watch and interpret change, and he must have the time to do it. It is not his duty to handle details. His job is to get others to do this. He leads more by example than by directives, and those who follow him feel the pull of his personality rather than the push of his will.

He is a good listener, but doesn't get excited over gossip. He has democratic ideas, but realizes that it is he himself who must make the final decision where the real goals of the company are concerned. The good leader realizes that he must delegate responsibility to preserve his company's investment, and make it grow.

Management is making effective use of your time. Time is the only ingredient of business that you cannot buy. Everyone has an equal amount of time given him each day, but once it is used he cannot replace it at any price. As a matter of fact, your time is your life; when you waste time, you waste your life. Since time is all that you have to offer your business, it would follow that the income from your business is related to how effectively you use your time. Now, this does not mean that the more hours you work each week the more money you will make. It must be clear that what you do with your time is more important than how many hours you work.

Popular Ways of Wasting Time

Let's look at several popular ways of wasting time.

1. By not keeping your mind on what you are doing. This could be because you are trying to do several things at once. Remember, you can only do one thing at one time.
2. By spending your time doing things that have been delegated to someone else. Remember, if you give another person a job to do, and then proceed to do it yourself, you will never get him to accept responsibility.
3. By working on projects that, even if successful, would not help you or your business reach the desired objectives.
4. By allowing yourself to be interrupted, letting phone calls interrupt a meeting with several of your key people, or letting an idle conversation make you late for an appointment, or seeing anybody and everybody who "drops by."
5. By carrying on a conversation after a decision has been reached. Once you have sold an idea, don't buy it back.
6. By having a meeting without deciding what the objective of the meeting is.

Now, let's look at ways of making better use of your time:

1. Write out a job description of what your own job actually is. List the things you are now doing and the things you should be doing. Work this job description over. Narrow it down until it can be accomplished in a normal work week.
2. Make up a time budget, making sure you list all the things you want to do, both business and personal. Allow two hours a day just to think. Allow time for industry and civic affairs. Allow time for recreation and time for your family. Allow time for two physical examinations each year in order to protect your health.

Management must develop its company's creed and philosophy. Every business over a period of time develops a personality. This personality, or "Image," should be carefully nurtured, in order to reflect to your customers and potential customers the type of business you really want to have.

The company Image is not necessarily static. The Buick motor car was at one time the leader in the medium price field, but its emphasis on competing with the "low-priced three" destroyed its Image and it lost its strong market position. On the other hand, Pepsi-Cola, which had the Image of "twice as much for a nickel too," was able over a period to eradicate its "cheap" Image and replace it with "Be sociable," thereby allowing it to be a strong competitor of Coca-Cola.

Every business has a purpose. Management expert Peter F. Drucker has said: "There is only one valid definition of business purpose: To create a customer." If we add to this statement that the function of the wholesaler is to do the things for his suppliers and customers more economically than they could do them for themselves, we have the starting point of establishing your company creed.

The reason for deciding upon your company's philosophy of doing business, or for understanding your company's philosophy of doing business, is to enable you to make your plans consistent with what you want your company to be.

If you want to build a reputation for having broad inventories, fast counter service, better delivery service, or any other policy that will make your company stand out from your competitors, you will concentrate on seeing that these policies are in fact realities and are understood and carried out by your organization.

Remember that you cannot be all things to all people, and so by creating for your company a character and personality to differentiate it from your competitors, you will establish and maintain a better reputation with the clientele with whom you seek to do business.

Acid corrosion "wears" out refrigeration parts fast

DANGER...keep acids where they're safe...with PA® 400

Moisture in refrigerant gases can quickly form hydrochloric and hydrofluoric acids in the system. Davison PA 400 is more than just a safeguard against moisture and freeze-ups, it is an effective watchdog against these damaging, corrosive acids. If acid formations have already occurred within the system, Davison PA 400 again will do the job. DAVISON PA 400's full flow no by-pass filtering action, high acid capacity and ability to remove moisture or even sludge, scale and particles of foreign matter as small as one micron in size make it the accepted standard desiccant for refrigeration. For more information, write Dept. 2607.

GRACE
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Industrial Chemicals Dept. 2607
Baltimore 3, Maryland

Inside Dope

By GEORGE F. TAUBENECK

(Continued from Page 1)

Dr. Kenneth Oakley of the British Museum believes that the first tools were flaked pebbles made by "near men" who lived in Tanganyika some 500,000 years ago.

Half a million years amounts to only one 10-thousandth of total world history.

Our progress, as a human race, would appear to be ahead of us. This thought makes one humble, doesn't it? Also proud, and optimistic.

Nothing New Under the Sun?

In ancient Rome machinery which heated rooms in homes of the rich was ingeniously devised. It consisted of a furnace that wasn't much different from modern American devices.

Pipes—made out of tile instead of metal—conveyed the warmth from the furnace to designated chambers.

However, instead of installing radiators, the Romans dreamed up a different arrangement.

They designed hollow areas beneath the floors, so that hot air could circulate here. This penetrated through the flooring and kept the temperature comfortable—a method to which we recently have returned.

This Is No Bull

Cattle experts who performed an autopsy on a dead bull at Michigan State university found these items in its stomach:

Half an innertube, two plastic bags, a rubber doll, nine pennies, a toy wristwatch, a fishing spinner, five clothespins, six can lids, a four-inch stack of bobby pins, 24 bottle caps, two earrings, three hypodermic needles, several cartridges, two men's rubber heels, five coffee can tops, a key chain, a broken bottle, safety pins, a gold watchband, 16 nails, and a set of false teeth.

Can You Top This?

Managing Editor Tom Ratcliffe of the *Beverly Hills Citizen* received the following "tardy" excuse from a reporter:

"It was my pleasure to receive your cheerful message after:

"1—I had run out of gas on the way to Councilman Rundberg's office.

"2—Received a parking ticket.

"3—Remembered my ex hadn't turned in my State and Federal income tax forms in time.

"4—Had two bulbs go off (if you'll excuse the expression) in my hand and had two fail to pop after Pete was kind enough to 'loan me' the copy camera.

"5—Had my mother call and ask me why in hell I wasn't named as the managing editor.

"6—Received 11 duns from various creditors (Tuesday IS payday, you know).

"7—Had my USAR Colonel call and ask why his promotion story only made the classified page.

"8—Had my daughter call and say that her mother said I spent her (my daughter's) dress money on whiskey.

"9—Had my girl friend call and say she was overdue on two items: car payments and .....

"10—Had Mr. Heyler (Beverly Hills Citizen publisher) come in and say I should quit because of illness. He was sick of me.

"Now in regard to your Page 8 story. It's been set and your Page 8 dummy is in the composing room.

"I'll write again if I get further work."

Neighbors heard Mrs. Ruby Burkhalter of Santa Monica, Calif., shout "Fire!.Fire!...Fire!." at the top of her lungs. They turned in the alarm.

To the hook and ladder company which screamed up she reported: "There's no fire here. I was just trying to get my husband out of bed."

Quotes of the Week

The picture of humanity all of the same type, all under the same institutions, all possibly wearing blue Chinese dungarees, is a nightmare of which you can get a faint foretaste from modern air travel. You can go from airport to airport all around the world and wonder where you are. They all look exactly alike. This standardizing tendency in our modern industrial systems makes one all the more eager to cling to any sense of separate personality, culture, or tradition.—*London Economist.*

In this period of our nation's history, it is no longer realistic (if it ever was) to consider education as a business only for youngsters. Today, we have to recognize that education is for all, children, youth, and adults. Education is a process that goes on and on and is never completed. Its promises may flourish during childhood, but its fullest fruition is found in more mature years.

Busy as we are polluting the air of our cities, fouling the water in our rivers, and burning our forests, we still are patriotic enough to take time to sing about how we love America, the beautiful.—BILL VAUGHAN.

Because of the continuity of scientific activities, the future has all the potentials of a paradise. But unless there is a rebirth of ideals and greater emphasis on values, it has all the possibilities of hell.—CHARLES ANSPACH, *President, Western Michigan college.*

The Anglo-Saxon conscience does not prevent the Anglo-Saxon from sinning; it merely prevents him from enjoying his sin.—SALVADOR DE MADARIAGA.

Love is the touchstone of psychiatric treatment. Psychiatrists believe, with almost religious fervor, that love can be fostered, extended, and used to subjugate hate, and thus cure disease.—KARL MENNINGER.

A friend will see you through when others see that you are through.—LOUIS SOBOL.

Statistics is the art of drawing a crooked line from an unproved assumption to a foregone conclusion. — *Science Digest.*

Motto of the Week

"Never kick a man when he's down. He might arise again."

Add Mottoes: Look alive. Remember, you can be replaced by a button.

NEW DEVELOPMENTS FROM DU PONT:

Traveling assistants for burnout jobs

Here's a new, practical, more effective way to handle refrigeration system burnouts. Not just replacement, not just flushing . . . but *complete* pressure cleaning with Du Pont's new cleaning unit. This new unit utilizes Freon-11*, the most effective selective solvent available for oil, sludge and grease. By completely removing contaminants that can cause new burnouts, you can do the job right the first time . . . eliminate costly, time-consuming call-backs.

Mounted on wheels, this handy assistant is the latest Du Pont effort to make your servicing job easier and more effective. And when it's time to recharge the system, you'll find Du Pont's improved lightweight "Zephyr" cylinder makes the job easier. Take a "Zephyr" on your next burnout . . . or any other job. You can't go wrong.

Leading air conditioning and refrigeration wholesalers who sell "Freon" refrigerants can probably rent you one of the new Du Pont units now. But if you'd like to build your own, write to: Du Pont Co., N-2420AA, "Freon" Products Division, Wilmington 98, Delaware. Ask for Bulletin FD-1.

FREON® premium quality REFRIGERANTS

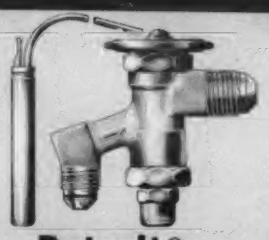
DU PONT

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

*FREON and F- followed by numerals are Du Pont's registered trademarks for its fluorocarbon refrigerants.

BASIC for Cooling and Heating

Refrigeration, air conditioning and heating men searching for components to act as nerve centers for their products and air-handling systems are sure to appreciate the value of these American-Standard Controls Division products. This also applies to anyone who must control or indicate the pressure or temperature of gases and/or liquids.

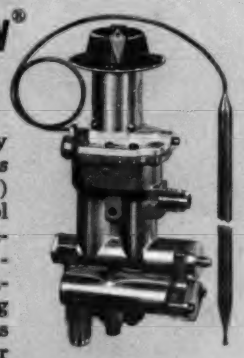


Detroit® Expansion Valves

Longer life, smoother operation, fewer moving parts, unrestricted refrigerant flow—these are the plus benefits ASCD builds into its expansion valves. Advantages such as these come only from years of manufacturing experience and constant research. Capacities range from .5 to 25 tons for R-12 and .8 to 32 tons for R-22. Specify them by name next time you order.

AMERICAN-Standard
CONTROLS DIVISION

Selectaflow® Controls



Here is a completely self-contained (*saves installation costs!*) thermostatic control valve specifically designed for year-'round air conditioning systems using hot or cold water as the heat transfer medium with single supply and return lines. Selectaflow controls are available in direct operating or remote control models, for fan and coil units up to 600 C.F.M. Next time specify Selectaflow.

AMERICAN-Standard
CONTROLS DIVISION

You can get detailed information on any of these products by writing American-Standard Controls Division, 5900 Trumbull, Detroit 8, Michigan.

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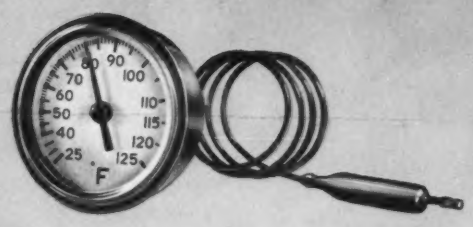
CONTROLS DIVISION



Remote Reading Thermometers

There are practically no limits as to the specialized applications for Rochester thermometers. This remote reading thermometer is hermetically sealed, is available in a wide variety of ranges and capillary tube lengths.

AMERICAN-Standard
CONTROLS DIVISION

Detroit Solenoids

Detroit solenoids are designed to provide long operating life under the most rugged conditions. They are available in sizes ranging from ¼" through ⅝" SAE; ¼" through 1⅜" OD; ¼" through 1¼" F.P.T. Positive shutoff, quiet operation and easy installation are among the features. To be sure of top quality always insist on the refrigeration and air conditioning products manufactured by American-Standard Controls Division.

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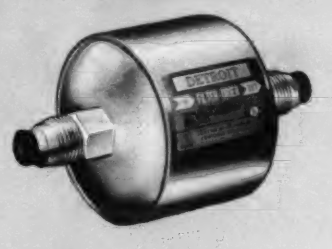
CONTROLS DIVISION



Detroit™ Driers

Moisture and acid-free refrigeration and air conditioning systems are assured with American-Standard Controls Division driers. Backed by years of experience these units are designed to give positive moisture control. They are available in a wide range of sizes, types and capacities. Ask for them by name—next time you order.

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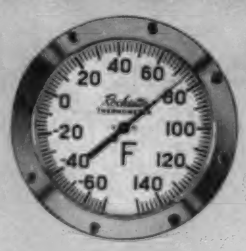

Industrial Thermometers

Rochester bimetal industrial dial thermometers provide extreme accuracy, are hermetically sealed and can be externally calibrated. Available in standard dial sizes from 1" to 5", and with scale ranges from minus 150°F to 1000°F.

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CONTROLS DIVISION

Detroit Moisture Liquid Indicators

With these Detroit Dri-Dot™ Moisture-Liquid Indicators in the line, one fast glance is all it takes to tell if the system is dry and fully charged. Large, optically clear sight glasses plus highly reflective interiors instantly reveal any shortage of refrigerant. Moisture sensitive elements use color to indicate system changes in moisture contamination. Line sizes are available from ¼" through ⅝" flare and ¼" through 2⅛" solder connections. For positive moisture control always specify American-Standard Controls Division indicators.

AMERICAN-Standard
CONTROLS DIVISION

Piggyback-Highway Trailers and Containers Have New Non-Mechanical Refrigeration System Using Liquid Nitrogen

NEW YORK CITY—Development of new piggyback-highway trailers and containers using a new non-mechanical refrigeration system employing liquid nitrogen has been announced.

The developments are expected to provide "better, more economical in-transit refrigeration" of perishable and frozen foods, according to a joint announcement by Linde Co., division of Union Carbide Corp., and REA Leasing Corp., subsidiary of REA Express.

"Nitrogen, with a temperature of —320° F in its liquid form, is the 'wonder' element in a new Linde-developed controlled refrigeration process called 'Polarstream.' It permits accurate cargo cooling or refrigeration as low as —20°.

"The new system is being installed in radically new types of all-purpose refrigerated semi-trailers and demountable containers which REA Leasing has started to make available on a nationwide basis to carriers and shippers for long distance, coordinated piggyback and highway hauls.

"A significantly greater equipment utilization is expected since easily changed thermostat settings permit any payload sequence of dry, non-refrigerated merchandise or refrigerated goods, regardless of the refrigeration requirements.

"The first operational equipment, leased to the Burlington Railroad, a member of the national trailer and container pool operated by REA Leasing, is being used initially to piggyback fresh meat for Armour & Co. and other meat packers overnight from Omaha to Chicago, and through connecting services to Eastern Seaboard points, at a constant 35° temperature.

"Meat can be refrigerated automatically in the 40-ft container-trailer units without in-transit attention up to eight days, far more time than required for even transcontinental hauls. Precooling of the trailer units is not necessary, since desired in-transit temperatures are attained by Polarstream units in less than five minutes.

"The new trailers and containers also permit a greater payload since cold air circulation space is not required. The colorless, odorless, and non-toxic nitrogen gas expands 650 times its liquid volume and permeates the entire refrigerated load, providing uniform temperatures and eliminating problems of warm spots in the cargo area.

"Two 12-volt batteries power the simple thermostat-solenoid system which actuates the flow of nitrogen spray from a single perforated pipe running lengthwise on the interior roof of the REA units.

"The liquid nitrogen, which neither burns nor supports combustion, is carried in four cylinders, each 370-lb. capacity, in a 20-in. deep section at the head end of the trailers and containers."

OCCUPYING a 20-in. section at the head end of the unit, the four 370-lb capacity liquid nitrogen cylinders shown with partition removed represent the nerve center of the new controlled refrigeration process which, it is said, will permit better, safer, more economical in-transit refrigeration of fresh and frozen foods from sources of supply to the market place.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

TTMA Awards Recognize USDA, NBS Research on Heat Transfer

HOT SPRINGS, Va.—Recognition expressed in a series of awards was given here by the Truck Trailer Manufacturers Association to the U.S. Dept. of Agriculture and the National Bureau of Standards, a division of the U.S. Dept. of Commerce.

The awards, presented by TTMA President P. M. Heinmiller, were in recognition of the research jointly sponsored by government and industry which led to the development of a method of measuring the rate of heat transfer in a vehicle while under refrigeration.

In addition to the "departmental" awards, individual recognition was expressed through a personal award to Harold D. Johnson, transportation specialist, Research Branch of the Dept. of Agriculture, for his work in coordinating the program, and to Clinton W. Phillips, NBS refrigeration and test engineer, for his efforts as engineer for the research project.

The award to the Dept. of Agriculture was accepted by William C. Crow, director, Transportation & Facilities Research Div., and that to the National Bureau of Standards by Paul Reece Achenbach, who is chief of the Mechanical Systems Section.

The research method is now commercially available at The Budd Co. testing laboratories in Philadelphia. Approximately 15 trailers of various models and makes have been tested to date at the facility.

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EXCLUSIVE DISTRIBUTORS IN
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Carrier AIR CONDITIONING AND REFRIGERATION

Editorial

On Compressor Failures

HOW MANY compressors fail each year: ½%, 3%, 10%?

How many of these returns are really defective? How many were ruined by improper cycle design, by incorrect application?

The standard answer to the first question is, "Our failure rate on compressors or condensing units is 1½-2%; if it exceeds 2%, we consider it an epidemic and ring the fire-bell."

Routine reply to the second query is, "About 30% of returned compressors have nothing wrong with them."

Evasive comeback to the third inquiry normally runs, "This varies with each customer and any discussion of it becomes touchy, because we may embarrass a customer."

Something is wrong here, very wrong.

The NEWS has been informed by a knowledgeable and authoritative source—a source with industry-wide perspective—that the average rate of compressor returns from commercial refrigeration applications approaches 10%; returns from air conditioning uses nearly double that; returns from heat pump service almost double those from air conditioning.

From an executive at one highly respected commercial refrigeration manufacturer, we heard, "We get 10-15% of our compressors back for one reason or another, not always because they are actually defective."

Now the differences between the claimed 2% and the alleged 10-20-30% returns cannot all be due to unnecessary replacement of functional compressors. They *are* due to:

1) compressors being shipped without pins, valves, rods, oil;

2) OEM cycle designs which cause the compressors to swallow liquid refrigerant, run without oil, operate at high compression ratios;

3) contractor errors while installing either the refrigeration cycle or the air handling system.

Why have we decided to mention failure rates?

Because it is axiomatic that technological progress cannot occur where facts are not available, that such progress is completely impossible in a context of *mis*information.

Only the naive believe that manufacturers would release for publication the actual data on failure rates, but the point is that even among themselves they remain silent or—worse—dispense misleading information on this important subject.

The matter is important because warranties must be based on realistic knowledge of returns. Many companies have attempted to back their own warranties only to find they had underestimated the financial reserves required for such a venture.

Too, knowledge of compressor failure rates has a bearing on inventory maintained by the industry's distributors, dealers, contractors, and wholesalers; such knowledge can have an effect on cycle designs, obviating much duplication of effort and helping cooling technology move faster through recourse to an increased pool of common knowledge about such things as tolerances, line diameters and lengths, the effect of accessory components on the cycle, operating parameters.

Give it some thought, gentlemen.

ON THE SOUND OF COOLING

Remington Corporation
Auburn, New York

Editor:

When I read the NEWS I save the best for last! That is why it is only now that I am writing you about your two-part article in the May 15th and 22nd issues concerning Studies Determine Suitability, as to Sound, Vibration of 3-ton Unit for Apartment House.

This long article certainly contains a lot of useful information for those of us who are seriously interested in improving the noise level of our equipment. There is, however, one point I should like to emphasize, namely: Figure 6 of Part 2 of this article can not be used for the purpose of arriving at *general* conclusions as to the relative noise levels of different *types* of equipment such as, for instance, small air cooled room air conditioners and three-ton self-contained air conditioners. It can only be used as a basis of comparison for two specific makes and models of equipment.

It would be a horrible mistake to condemn all other window units as a result of the unfavorable comparison arrived at by the tests reported in this article. This is because the noise level of the one actually tested may be higher than that of other makes of the same capacity. Additionally, there are other types of small air cooled self-contained air conditioners of the incremental type the noise level of which is far, far below that of the finest traditional window units.

Let's have more articles of the same type.

HERBERT L. LAUBE,
President

ON A SALES ACADEMY

Manufacturers' Agent
Washington, D. C.

Editor:

Your editorial in the June 26 issue, "An Air Conditioning Sales Academy," is very interesting. Anything pertaining to the salesman and the problem in securing capable salespeople is always interesting.

We hear a great deal about this matter of selling. Even the politicians are getting into the act—Secretary Hodges and Senator Goldwater—but, like Mark Twain said (he never did but it makes good copy), "no one does anything about the weather." Sometimes it appears that no one is doing anything about selling, except talk about it.

The Air Conditioning Sales Academy would be a splendid idea, but I doubt it would be practical. Much too costly. Too few salesmen would pay tuition, or part of the tuition, even if they could take the time to attend. Furthermore, we do not need an Academy—we already have one of a sort in every city and community in the country.

I refer to the gas and electric utility companies. They have the money, time, place, personnel, and INTEREST to do the job. They would have little trouble in recruiting the assistance and help from the manufacturer, local dealer, distributor, contractor, university, local sales clinics, Advertising Clubs-Sales Executives Clubs, etc.

Here would be an opportunity for the manufacturer to actually do something FACTUALLY for the man who sells air conditioning, whether it be the dealer, distributor, or salesman himself. To do something with their manpower sales-promotion, engineering, service, marketing—and with MONEY.

Obviously the man to head this project should be George Jones and his Air-Conditioning and Refrigeration Institute. The Institute would probably require additional staff and here again the manufacturer has the opportunity to contribute to this additional work load.

This would be a "down to earth" TRUE SALES COURSE, not merely a lot of "platform men." This would be a real "college" course in the sale of air conditioning, LOCALLY, day or night.

RODERIC PETERS

THIS IS SELLING?

New York State

Editor:

In the June 20th edition, you had an editorial relating to an "Academy" for sales instruction on room air conditioners. Having been in the refrigeration industry for 35 years, I must say that I heartily agree with this item. But I don't think you went deep enough into the problem, particularly on RAC.

I firmly believe that a great effort should be placed on "proper selling" of product. I also think that this effort must come from the manufacturer, distributor, and dealer levels. My interest in all these years has been and still is from the service area. More and more in the later years, service has had to correct the misapplication of product, or advise the consumer (who is not always without some fault in this problem), that the application will not satisfy and make recommendations as to what is more suitable.

In many instances (my record shows 73% in the last three years), a 1½ hp or 2 hp unit has been installed to cool 3 or 4 rooms with all kinds of walls, partitions, etc., to overcome. I have seen 2 hp units sold with the idea that they will cool both up and downstairs floors. Also, with all due respects to the dealer, in many instances, the consumer "demands" a single unit with the mistaken idea that all that matters is Btu and nothing else. If the prime purpose is "not losing a sale," then I guess this eliminates the dealer responsibility because when this is called to the attention of a dealer, invariably, this is his reply.

How can you get air to go around corners, or through doors at right angles, or how can you drive the air 60-70 feet away from the unit to reach back areas. Yet this is what the "salesman" said would work perfectly. As a result, the product is condemned as "defective" or the field man is expected to make it work.

I respectfully suggest that this is an area that needs much education.

J. H. H.

DROOPLEY GOES TO WORK, DAY IN DAY OUT, LOOKING LIKE HE JUST GOT RUN OVER....
BUT GET A LUMP OF HIM IN HIS BOWLING OUTFIT! WOW! THE BEST-DRESSED MAN IN CREASEVILLE....
THANK AND A TIP OF THE HATLO HAT TO KEN KAISER, 310 HILLVIEW AVE., ALEXANDRIA, VA.
4-8
They'll Do It Every Time
by
Jimmy Hatlo

AIR CONDITIONING HEATING & REFRIGERATION NEWS
F. M. COCKRELL, Founder

'The Conscience of the Industry'

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From the Files of the News

25 years ago . . .

Air conditioning specifications of both year-round units and summer air conditioning equipment published in the NEWS covered four classifications: self-contained floor type, remote floor-type, suspended type and duct-type. Thirty-five manufacturers reported on their year-round and summer units, 16 reported on winter conditioners, and three manufacturers of humidifiers provided their specifications.

Twenty of the 63 air conditioning installations in Chicago during June were in private offices, and 14 installations were in restaurants; a 100-ton restaurant installation was the largest recorded for that period.

Free inspection of more than 5 million heating plants throughout the United States, and an education program sponsored by manufacturers, dealers, and contractors will mark the National Warm Air Heating and Air Conditioning Week, Aug. 17-22. The check-ups will include necessary minor repairs and advice to homeowners on how to convert their existing heating systems for partial or complete air conditioning. July 24 marked the opening of Eaton House in London, England's first completely air conditioned apartment house, and each of its 30 apartments is equipped with a separate York installation.

Minneapolis air conditioning dealers are complaining of difficulties in selling refrigeration equipment for air conditioning, because an abundance of artesian wells in that area provides 50°F water for cooling systems cheaper than the refrigeration equipment.

Variety marks the 74 air conditioning installations reported by one Minneapolis-St. Paul dealer; 42 used refrigeration equipment alone, four more combined refrigeration equipment and well water, 19 used well water only, one used brine, one ventilation equipment, one humidification, and six specified winter conditioning only. . . . The Edgewater Beach Hotel Grill, "famed as Chicago's coolest spot" is air conditioned with Peerless equipment. . . . The Trane Co. has resumed its six months' training course in air conditioning for hand-picked engineering graduates who are to act as sales representatives in Trane's 62 branches. . . .

Dr. C. A. Mills, from his studies on the relation of weather to human behavior, claims that the world is getting warmer and that if the U.S. doesn't get air conditioned quick (!) it will become a country of quick-tempered, semi-tropical emotional people with low energy.

The NEWS' editorial, in noting that "everybody wants air conditioning, but nobody wants to pay for it," emphasized the need of **selling air conditioning** with the idea that it **does cost money** but it's **well worth the price.**

10 years ago . . .

Air conditioning 11 hospital buildings and four dental clinics at Camp Polk, La. will cost $109,957.87 —what is said to be the largest air conditioning contract awarded a central Louisiana firm. . . . To provide year-round air conditioning for themselves, and also to demonstrate to prospects how the equipment works, United Refrigeration has a 15-ton system installation in its new San Francisco wholesale store. . . . Acme Industries, Inc. and Baltimore Aircoil Co., Inc. have each released new bulletins which describe their lines of cooling towers.

Announcement was made of publication of a new book by George F. Taubeneck—"Both Feet On The Ground" for $5.95 per copy.

The Hong Kong Frigidaire distributor successfully untangled problems of (1) no space for the air conditioning equipment, (2) no water available, and (3) low voltage, by installing two ARL-100 Frigidaire window units in the veranda windows of the Watson & Co., Ltd. offices, and then mounting above two bookcases (which he built) a tier of three AR-100 units to provide the 8 tons of air conditioning needed.

Allen Appoints Parsons

DETROIT — Frank E. Parsons, thermal insulation engineer, has been appointed by Allen Industries, Inc., to direct national sales for its polyurethane foam products, now in production at its Rahway, N. J., plant.

Pyramid Offers New Cataloging Method

LYNBROOK, L. I., N. Y.—A new method of cataloging that simplifies the location and description of product data has been announced by the Pyramid Instrument Corp., here, maker of "Amprobe" snap-around test instruments.

An innovation for Pyramid, the method also enables the user of the catalog to keep it up to date.

"Essentially, this method consists of the use of separate sheets, each solely devoted to individual instruments instead of a bound booklet in which all products are combined in a 'permanent' format," the company explained.

The individual sheets, because they are Kalamazoo punched, permit the catalog user to incorporate new sheets on new products directly into existing binders, it was pointed out by Pyramid.

At present, three new sheets are available. They give details on Amprobe Rotary Scale Models (RS-1, RS-2, RS-3, RS-300) Amprobe Cable Tracer, Amprobe Jr., Amprobe Jr. Testmaster Kit, Amprobe Testmaster Kit, Amprobe Deca-Tran, and Amprobe Energizer.

Pyramid also has announced the availability of new price sheets which conform to the format recommended by the National Association of Electrical Distributors.

The price lists and the catalog sheets may be obtained from any of the following addresses:

Pyramid Instrument Corp., 630 Merrick Road, Lynbrook, N. Y.; Canadian Sales Div., Atlas Radio Corp., 50 Wingold Ave., Toronto, Ontario; British Sales Div: H. J. Baldwin Co., Ltd., London, England; Export Sales Address: AMPROBE LYNBROOK.

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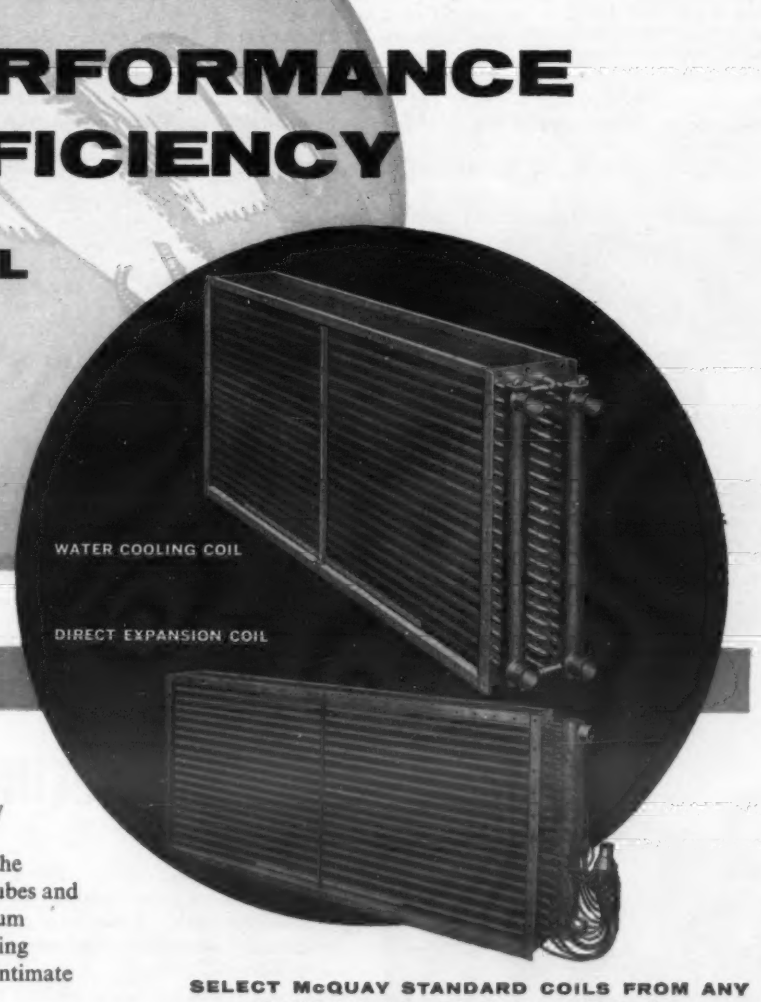


McQuay Means Quality

The new McQuay Type "5" coil design offers you a new high in fin efficiency by attaining the highest heat transfer rate possible without excessive air friction. The combination of equilaterally staggered tubes and modified rippled fins produces a maximum of air turbulence to interrupt the insulating boundary layer film and still retain the intimate and prolonged contact between air and the heat exchanger surface.

Each Type "5" coil features practically an unlimited flexibility in selection of coils to more accurately meet load requirements. Standard coils are furnished with copper headers and flow-controlled circuiting to assure the turbulent fluid flow necessary without using restrictive internal devices.

For any coil requirement, look to McQuay. Call your local McQuay representative or write to McQuay Inc., 1607 Broadway N. E., Minneapolis 13, Minnesota.

THE NATION'S LARGEST COIL MANUFACTURER

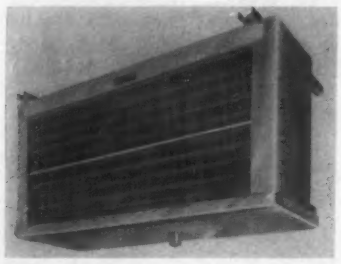
SELECT McQUAY STANDARD COILS FROM ANY COMBINATION OF THE FOLLOWING:

Single Serpentine . . . . . One to 14 fins per inch
Half Serpentine . . . . . From 6" through 36" high face
Double Serpentine. . . From 6" through 144" nominal tube length

ALSO AVAILABLE IN SPECIAL CIRCUITS, FIN SPACINGS, SIZES AND MATERIALS

McQuay INC.
AIR CONDITIONING • HEATING • REFRIGERATION

Chiller Units Designed for Carcass Rooms



● A new line of carcass chiller units designed to meet the special refrigeration requirements and high humidity conditions of the meat packers' carcass chilling rooms has been introduced by Recold Corp., Dept. AH&RN, 7250 E. Slauson Ave., Los Angeles 22.

The units feature galvanized construction and totally enclosed motors for protection against corrosion and condensation. Further protection is afforded by an insulated drain pan which is separated from the side panels so as to catch any condensation which forms and runs down the sides of the unit, it was pointed out.

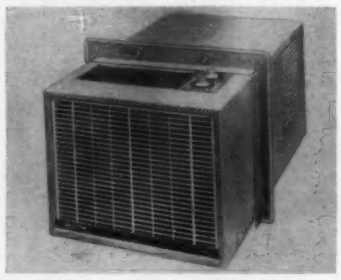
Carcass Chiller (CC) units are now available for recirculating ammonia systems with capacity up to 75,000 Btuh at 10° t.d. and for flooded ammonia or direct expansion R-12 and R-22 up to 60,000 Btuh at 10° t.d. Ammonia units may be piped in the field for water defrost, hot gas defrost, or both. Units for R-12 and R-22 are equipped for water defrost.

Room Unit Designed for Casement Windows

● Rooms with casement windows can be easily air conditioned without remodeling by means of a new casement window air conditioner it has developed, according to Amana Refrigeration, Inc., Dept. AH&RN, Amana, Iowa.

Designated model 100CA-2R, the unit is specially designed to fit the vertical lines of casements while providing room-cooling capabilities of standard window units, the company stated, adding: "Remodeling, cutting, or welding of window frames is completely eliminated. The new Amana casement air conditioner slides into place in the window, after the glass is removed, and is securely fastened by four thumb screws."

Thermostat control, permanent type washable filter, zinc-coated steel for rust protection, and the



Amana "Silent-Aire" turbine for quiet operation are standard features on the unit. Specifications for model 100CA-2R are:

Btu capacity (NEMA standard) —6,600; fan motor hp—1/10; voltage—115; amperage—9.5; wattage —1,000; cfm—230; height—10⅞ in.; width—14½ in.; depth—26 in.; net weight—100 lbs.

'Fault Finder' Checks Wiring Under Plaster

● A new "Fault Finder" said to locate breaks quickly and accurately in electric heating cable embedded in finished dry wall or plastered ceilings has been developed by Electric Radiant Heat, Inc., Dept. AH&RN, 1517 Wells St., Fort Wayne, Ind.

The unit can also be used, the company said, to spot plastered over outlets, junction boxes, and wiring within walls. The transistorized, battery-operated unit consists of a transmitter signal pack, a receiver pick-up pack with telescoping antenna probe, and earphone headset.

"Signal generator leads are attached to accessible embedded cable leads, which makes each cable an extension of signal generator antenna," it was explained. "The operator scans ceiling with antenna probe. Resulting signals are amplified into a small headset. Null zone indicate breaks."

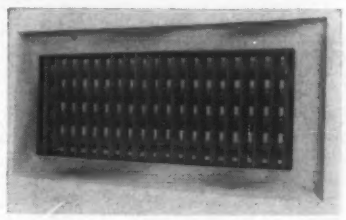
The company said the Fault Finder is shipped postage prepaid within the U.S.A. for $79.95.

Nylon Moving Parts, Featured In Registers

● A new line of registers, grilles, and curved blade diffusers featuring extruded, anodized aluminum frames combined with all-nylon moving parts, blades, and damper mechanisms, is now ready for marketing, it was announced by Air Guide Corp., Dept. AH&RN, 275 N.W. 27th St., Miami 37, Fla.

The line offers "the advantages of rigid frames plus the permanent 'self-lubricating' features of moving nylon parts which can never rust, bind, or jam up in use," the company indicated.

The frame sections are mechanically joined at the miter with the use of the firm's "Corner-Loc"



invention which "adds double strength to the corners, and assures a 'force-fit' miter." Gasket sealing is accomplished by a method of using a vinyl gasket extrusion fitted into a special channel in the undercarriage of the frame.

Horizontal Blower-Coil Units Feature Versatility

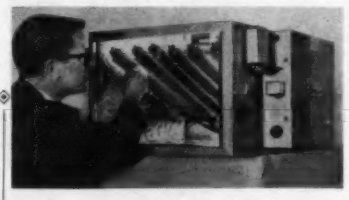
● The addition of two new models—7½ and 10-ton sizes—to its existing line of horizontal blower-coil units has been announced by Magic Aire Div., United Electric Co., Dept. AHRN, 501 Galveston St., P. O. Box 119, Wichita Falls, Texas.

The new models supplement the 2, 3, 4, and 5-ton units which the firm introduced last fall.

The horizontal blower-coil unit is said to be "extremely versatile in application. It can be used for add-on cooling in an existing warm-air system where it is feasible to use the furnace blower for heating only. In addition, the blower-coil unit is usable in applications requiring cooling only. In the latter case, either intake or discharge air, or both, can be handled through a duct system; or, the unit may be installed within the conditioned area, with direct air intake and discharge through plenum grilles in the unit, it was explained.

"Additional room is provided in the cabinet for hot water or steam coil for heating."

Electric Duct Furnace Provides Supplemental Heat



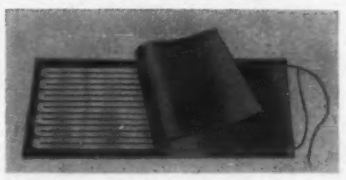
● An electric duct furnace is being manufactured for national distribution by Wesco Furnace Div. of Northwest Foundry & Furnace Co., Dept. AH&RN, 2345 S.E. Gladstone St., Portland 2, Ore.

"Installed in the air duct, the furnace provides supplemental heat for heat pump systems and long heat runs of any type, as a reheat unit in dehumidifying systems, and to heat dry air in industrial and agricultural systems where air is needed for drying or curing," it was stated.

The furnace comes in 10, 15, and 20-kw sizes producing 34,150 to 68,330 Btu, according to Wesco. All parts and controls are factory assembled and wired. Installation of the furnace can be horizontal or vertical. The unit has a baked enamel, insulated cabinet suitable for downstream installation in air conditioning systems, the company said.

'Low-Cost, Rugged' Defrost Pads Developed

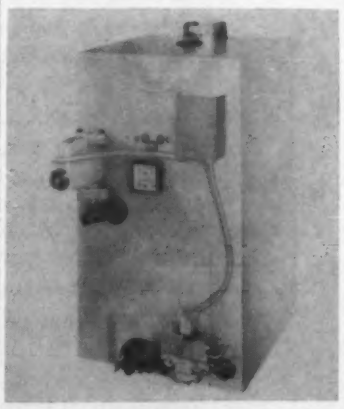
● A new type of construction utilizing resistance alloy foil laminated in neoprene rubber is now being used by Thermal Circuits, Inc., Dept. AH&RN, 59 Park St., Beverly, Mass., to make "low-cost, rugged" electric defrost pads.



"Wide bands of foil eliminate wire windings and provide uniform heating without thermal stresses or local high temperatures," the company stated. "Heat Sheets are flexible and virtually indestructible from -50F dry or immersed. 'Heat Sheets' may be unrolled and installed quickly and easily without adhesives or fittings, even in a cold freezer room.

"Heat Sheets 1/10 in. thick are available in any desired shape, size, wattage, and voltage to 480 volts three phase. Cut-outs and holes can be provided as required without tooling costs. Leads are brought out at one end through an epoxy seal."

Boiler for Forced Hot Water Heating Available



● A new PBG Series gas-fired steel boiler for forced hot water heating is being marketed by Thatcher Furnace Co., Dept. AH&RN (13P), Garwood, N. J.

This new series is available with the following AGA input ratings: 120,000, 145,000, and 170,000 Btuh. A packaged unit, the boiler comes factory-assembled, with a circulator, ready for power and pipe connections. A tankless domestic hot water heater is available as optional equipment.

Features include square casing with glass fiber insulation, vertical ten-tube bundle design with stainless steel baffles, and a single port upshot burner. The top of the blue enameled casing is split for easy removal to expose smoke hood and boiler tubes for cleaning. This feature eliminates the need to disconnect the supply piping and drain system.

NOW...

BUY A CLEANING UNIT DIRECT FROM THE MANUFACTURER

You've read about, heard about—and maybe even seen—one of the new Du Pont cleaning units. These new units *completely* pressure-clean a refrigeration system after a burnout.

Each unit comes complete with easy-to-follow instructions that make clean-up after burnout as easy as A-B-C. You can have your choice of filter-drier: Henry, McIntire, Sporlan, Mueller.

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August Climatological Evaluation Chart Gives '59 and '60 Ratings for 31 Cities

NEW YORK CITY—The last of four charts comprising a "climatological evaluation of air conditioning weather" for the key months of last year shows the air conditioning "sales climate" for 31 cities in August compared to "normal" and to the same month of 1959.

The evaluation was made by Weather Trends, Inc., a private weather forecasting and weather-recording organization.

Although the findings are presented in simple, summary form, a considerable amount of data was reviewed and analyzed, including:

(1) Average monthly and average maximum temperature; (2) number of days of 90°, or over, compared to normal and last year; (3) duration and extent of hot spells, if any; (4) other elements, such as number of wet days, humidity readings, percentage of normal sunshine, etc., to see if there were unusual departures.

Weather Trends placed ratings of 5 ("superior"), 4 ("favorable"), 3 ("normal"), 2 ("unfavorable"), or 1 ("poor"), on the air conditioning "sales climate" for the 31 cities covered. In addition, a finer breakdown of the so-called "normal" category was made, using 3, 3—, and 3+.

Also, the air conditioning weather for each of the 31 cities during the period covered was rated as "much better," "slightly better," "better," "similar," "worse," "slightly worse," or "much worse" than in the corresponding month of 1959.

For last August, only one city (Denver) got a "superior" rating and four (Baltimore, Memphis, Miami, and Richmond) a "favorable" rating. Twenty were rated "normal," five "unfavorable," and one (Cleveland) "poor."

Compared to 1959, no city was rated as much better, two were rated as better, and one as slightly better. Four were rated as similar, 11 as worse, nine as slightly worse, and four as much worse.

Climatological Evaluation

Legend for 1960: 5—superior; 4—favorable; 3—normal; 2—unfavorable; 1—poor.

Legend — Comparison 1959: MB—much better; B—better; SB—slightly better; S—similar; MW—much worse; W—worse; SW—slightly worse.

	AUGUST, 1960 Compared to:	
Key City	**Normal**	**1959**
Atlanta	3	W
Baltimore	4	SW
Birmingham	3	W
Boston	3	W
Buffalo	3	W
Chicago	3	W
Cincinnati	3	W
Cleveland	1	MW
Dallas	2	SW
Denver	5	B
Des Moines	3—	MW
Detroit	2	MW
Houston	2	S
Indianapolis	2	MW
Kansas City	3	SW
Los Angeles	3	SW
Memphis	4	S
Miami	4	B
Minneapolis	3	SW
New Orleans	3—	SW
New York City	3	SW
Oklahoma City	2	W
Omaha	3—	W
Philadelphia	3	W
Phoenix	3	S
Pittsburgh	3	W
Portland, Ore	3	SB
Raleigh	3+	S
Richmond	4	SW
St. Louis	3	W
Washington, D. C.	3+	SW

Prepared by: Weather Trends, Inc., 550 Fifth Ave., New York City 36.

Current Literature

Carbonators

BIRMINGHAM, Mich. — A two-page bulletin describes variety of applications of Temprite automatic carbonator and combination carbo-coolers for use in soda fountains, bars, taverns, drive-ins, ice making machines, automatic drink vendors, etc.

This bulletin No. T-507 is available from Temprite Products Corp., P.O. Box 72, Birmingham, Mich.

Zone Controls

EAST HADDAM, Conn.—Now available is a new four-page catalog that describes how to install motorized "Zone-A-Trol Straight Flo" valves to provide individual room temperature control or zone control on any new or existing hydronic heating system.

The catalog provides a number of helpful piping layout diagrams for zoning various types of systems and illustrates step by step how to install different types and sizes of valves available, according to Econo Products Co., Div. of Viking Instruments, Inc., here.

Centrifugal Pumps

HARRISON, N. J. — A new bulletin entitled "Centrifugal Pumps — Installation, Servicing and Maintenance" has been published by Worthington Corp.

The 18-page, illustrated Bulletin G-2971 includes information on storage, foundation construction, alignment, piping; priming and starting, lubrication, and basic servicing; and internal inspection.

PERFECTION IN VERSATILITY

It's easy to match a Perfection air conditioner or heat pump to any installation requirement. Here, for example, is a Perfection remote air-cooled condensing unit and a full selection of indoor coils. The condenser can be installed in any outside location with an upflow, downflow or horizontal indoor coil selected to match the exact requirements of the installation. Horizontal and vertical air handlers are available, too, where added blower capacity is needed. Perfection Tri-Pak Remote Heat Pumps offer equally convenient versatility with indoor components that can be combined to provide any conceivable air flow pattern — to solve any installation problem. And Perfection Tuck-away units — both air conditioners and heat pumps — combine all components in a single compact cabinet for unprecedented ease of installation. Try Perfection for complete flexibility in 2, 3, 4 and 5-ton air conditioners and heat pumps.

PERFECTIONISTS are a select group of distributors and dealers. Want complete details? Write Perfection Division, Hupp Corporation, 1135 Ivanhoe Road, Cleveland 10, Ohio.

PERFECTION

Eastwood Mall Shopping Center--

(Continued from Page 1)

units—with capacities up to 75 tons—offer architects and engineers design flexibility.

The largest of the heat pumps used in the Eastwood center have capacities of 50 tons. The average size unit used is 15 tons, and some of the smaller stores are equipped with 3-ton units. Five 15-ton units supply air conditioning and heating to the main mall area.

Equipment and installation savings are not the only advantages of the packaged heat pump approach, believe the system designers. Unitary equipment also has delivered on promises such as:

Easing Design Problems: Instead of a large system problem, each store can be treated separately; changes in plans are made easily and at later dates; in one case one of the department stores took additional space for a garden shop after construction was under way and to integrate the additional area into the existing layout a partition wall was left out and a separate 15-ton heat pump was placed above the dropped ceiling.

Space Savings: At Eastwood the equipment occupies only 50% of the space a central system would require; many of the units take no floor space, are mounted just under the roof; ratio of rental area to total area in the Eastwood center is three to four, not even counting the small counter areas like the milk bar in the mall area.

Simplifies Leasing: No complicated cost distribution is required, tenant stores pay for their own utilities, are billed by the center only for water supplied to the heat pump at a flat rate the year-round.

Reduced Operating Costs: Calculations by the utility indicate that heating is provided for a cost only one-third of a fuel fired system—not counting the savings by elimination of the installation costs of a boiler system.

Underground Water Supply

In the designing of the air conditioning system, the individual heating and cooling load was calculated for each store separately and then totalled with the cooling and heating required for the mall areas. Calculations indicated that the total loads were nearly balanced and the availability of an excellent supply of underground water led to the consideration of heat pumps for the center.

The appeal of the heat pump stems not only from the fact that a single piece of equipment using only electricity for power can supply both heating and cooling, but, in addition, supplies more heat energy than it consumes in electrical energy.

A portion of the heat produced in the winter can be considered as a bonus since the owner pays only for electricity used in pumping it into his space. The bonus is a result of the fact that more heat energy is delivered to the space than would be created by direct conversion of the electrical energy to heat. In the Eastwood installation the underground water is a reliable, low cost source of the heat.

The cooling load for the center was calculated as 803 tons for the stores plus the mall load of 87 tons. The winter heating load was 12,733,000 Btuh, equivalent to 1061 tons of refrigeration, not considering heat gains from people or lights. Consideration of the heat contributed by lights and occupancy brought the seasonal loads into approximate balance.

The mall load was reduced by considering the contribution the exhaust air from the stores would make in meeting the load requirements. All air flows from the stores into the mall from which it is exhausted. This reduced the cooling load to approximately 70 tons.

Mall Requires Little Heating

The mall cooling load is divided: 22% for conduction, 32% for solar gain, 11% for lights, 21% for infiltrating air and 14% for occupancy. In the winter very little heating is required on the mall during occupied periods.

Outside design conditions were 10°F for winter and 95° dry bulb, 78° wet bulb in summer. Inside design conditions were set at 70° for winter and 80° dry bulb, 67° wet bulb in summer. Relative humidity for summer conditions were 72% outside and 50% inside. The loads were divided, on the average, at 79% sensible and 21% latent — well within the range of packaged equipment.

In the restaurant and cocktail lounge, because of the higher latent heat load due to heavier occupancy and cooking, supplemental electric blast heaters were used in the air distribution system for humidity control through reheat.

Use of package equipment also simplified the handling of fresh air. Fresh air is introduced through intakes in each store, conditioned through the package equipment. Exhaust air flows out to the mall. In one of the larger department stores one of the heat pumps was modified to handle 100% outside air.

For more than 70 years a flowing well had existed on the site. Geology surveys indicated a large underground stream at a depth of 80 to 120 ft. that would assure a continuing supply of water for the heat pump system.

Three wells were sunk. One handles the majority of the system's needs and the second comes on when peak conditions require. The third functions as a standby.

Ground water is at a temperature of 65° the year around. During cooling the heat pumps use about 1/gal/ton/min and for heating require 1.25 gal/ton/min. An 8-in. pipe line brings the water to the center and branch lines; smaller lines distribute the water to the individual heat pumps.

In the summer, discharge water from the heat pumps is 90°and in the winter is 46°.

Condenser water is exhausted to the roof in the summer where it is used to reduce the solar heat gain by flooding the roof to a depth of 2 inches. From the roof it flows to the storm drains.

The heat pump unit design eliminated any need for special water treatment. The heat pumps feature a tube-in-tube type condenser made from corrosion resistance admiralty metal without internal joints.

Stores Have Individual Controls

Each heat pump system is under thermostatic control, regulated by the individual store manager. They are shifted from heating to cooling as conditions require, giving 365 days comfort. Borderline conditions caused by varying occupancy in spring and fall are easily satisfied. One store may require cooling, another heating and both are accommodated since water flow is constantly available.

The larger units are multiple compressor models which offer step control in meeting less than maximum cooling and heating loads. When loads are light only one or two compressors need operate; when the load increases the additional compressors come on.

The successful application of packaged heat pumps at Eastwood may lead to a new trend in shopping center construction, believe Typhoon officials.

"Shopping centers are reaching for better techniques in providing shopper comfort," it is pointed out. "The aim is to give

ADVANTAGE of the mall approach in shopping center design is indicated in this view of the main mall showing one of the decorative fountains and milk bar that add color and gaiety to the setting. Grille above the palm trees in photo serves as return air intake for the heat pump concealed above the ceiling of kiddie recreation center at left.

A MERCHANDISING ADVANTAGE of the air conditioned mall is the extra visibility afforded merchants. This entire furniture store is on display, separated from the two adjoining malls by only the sliding chain link "walls." Grille "walls" may be pulled aside completely to allow free flow of traffic into and out of stores.

ONE OF TWO equipment rooms in one of the larger department stores in the center. Two 50-ton heat pumps (one of which is shown here) serve the store and office area on the second floor. Heat pumps are controlled by pneumatic thermostat control board in background.

TYPICAL INSTALLATION of one of the five 15-ton heat pumps serving the mall area. Compact factory assembled units are mounted on small platforms above adjoining stores, take up no floor space. The platform is large enough to accommodate service personnel doing routine maintenance.

12 YEARS and over a MILLION UNITS

That's the experience behind Addison's Commercial Line. Since 1949 our facilities have expanded each year to where we now have more than 200,000 square feet of manufacturing area. Addison's know how, experience and fully equipped plants are your assurance of quality products.

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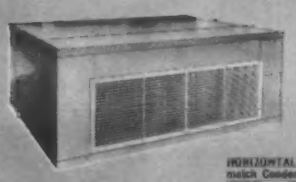
CONDENSING UNITS—7½ to 20 h.p., multiples for higher ratings • Rugged • Quiet • Weatherproofed • Diagonal coil for minimum plan area • Controls wired and enclosed • Compressor section may be detached • Designed for outdoors.



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the new centers competitive advantages in market areas already served by established centers. The enclosed mall center, where customers are treated to air conditioned sidewalks, park-like settings and strolling scaled distances that encourage long stays and impulse buying, has been one of the most attractive ideas suggested.

First Enclosed Malls Proved Expensive

"Unfortunately the first enclosed mall centers were very expensive to build. Heart of the design problem in the enclosed center is the development of an air conditioning system for the mall at a reasonable cost. Air conditioning the stores in a center is a complex problem itself. Enveloping the shopper almost from the moment she steps from her car and even as she moves from store to store creates a more complex problem — and threatens greater costs.

"Chain store managements, the major tenants in most centers, though realizing the need for creating center drawing power, also recognize that increased amenities may also mean increased rents. Air conditioning the shopper within the store is a recognized necessity. Air conditioning the window shopper is a question of relative costs.

"Previous enclosed mall centers used field assembled built up central heat pump systems, which required extensive and complicated air and chilled or heated water distribution systems, controls and a special operating force to run the large machinery. But more important to the store owner and developer, it made equitable distribution of owning and operating costs a ticklish problem.

High Rentals Tend To Limit Mall Cooling

"Reason for quibbling over distribution of the costs is simply that however large or small the center is, in one way or another the total costs will be reflected in rental rates. Obviously unless the design concept can hold the costs down, however attractive the mall idea may be from a total merchandising aspect, it faces tough selling. Net result has been that fewer than one shopping center in a hundred have been built along the enclosed mall plan, though some have been designed for eventual enclosure of the mall if competition necessitates it."

Located off the new four-lane highway linking Birmingham and Atlanta, Eastwood is a 10-minute drive from downtown Birmingham. The center is within eight minutes of the new eastern residential areas of Birmingham. The 1.6-million sq ft site also fronts on the old Atlanta Highway and Country Road. Adjacent is a large drive-in theater also operated by the center developer, Newman H. Waters.

The exterior facade of the center is actually the rear rather than the front of the stores. Stores front on the main 750-ft long, 50-ft wide mall running down the center of the building or one of the three minor malls leading from the parking fields to the central mall. The minor malls are 25 ft wide. Two are 200 ft. long and the third is 150 ft. long. Access to the stores is direct from the parking areas or from the main or minor malls.

The malls are designed to create an atmosphere of relaxed comfort for the shopper. Two hundred plants and trees have been placed there. Palms, ferns, banana trees brought in from Florida are expected to thrive because of the closely controlled heat and humidity conditions. A mixture of daylight from skylights and artificial light provide a restful atmosphere.

Two mall pools with spraying fountains, statuary, imported lily pads and rainbow trout and a careful array of small counter type shops and milk bar add color and gaiety to the setting.

Store fronts are a varied array of carefully selected materials, ceramic tile, native stone, glazed and rough texture brick that provide variety without intrusion on the total effect. One of the strongest merchandising assets of the enclosed mall is the open access to the stores.

Many stores have little if any glass to divide the stroller from the merchant. Instead, chain link "walls" hung from ceiling tracks are provided that may be moved aside to place the whole store on display.

In the case of one furniture store facing both the main mall and a minor mall the only separation from the mall area is provided by the chain link "walls." One is usually drawn aside completely, and the second provides a grillwork background to the 18-room arrangements within, without blocking the view of the passerby entering through the minor mall.

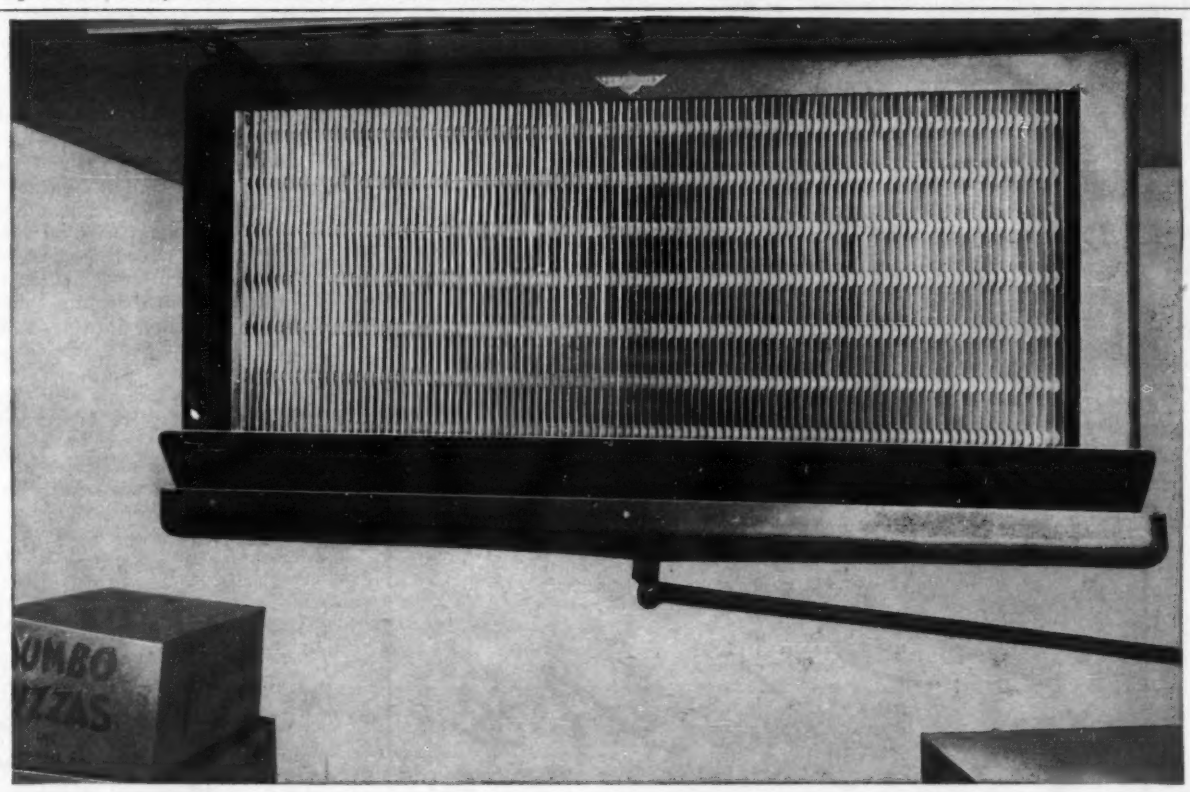
"When this open front occurs the shopper has the feeling of the store coming out into the mall and the mall actually going into the store," Thorsen, the architect, indicates. It also avoids, as he points out, the problem of maintaining the clean appearance of wide glass expanses that lure children's finger marks.

Large access doors of the mall, 11.5 feet wide and 14.5 feet high, make it easy to bring in equipment for special displays. The mall area has been used for local art shows, fashion shows, automobile displays and other special events for the community. Also adding to the feeling of a community center is an auditorium seating 200 located on the second floor available for public meetings free of charge. Built over the restaurant, a dumb waiter connects the auditorium kitchen with the restaurant.

Plans have already been drawn by the developer for eventual expansion of the Eastwood center to 750,000 sq ft with the addition of a 200,000 sq ft, two-story department store on the east and an additional 150,000 sq ft shopping area on the west.

Waters, a long established real estate executive in the Birmingham area and president of the firm owning the Eastwood Mall, is a strong advocate of heat pumps. Owner of a number of theaters and three downtown office buildings he has had experience "with every type of air conditioning equipment."

Though he admits the idea of packaged heat pumps was difficult to sell to the national chains when the center was being planned because of their newness, he said, "The thing that sells me on heat pumps is the uniformity of conditions 365 days a year. We have a terrible time in our office buildings between seasons trying to satisfy tenants. Here every tenant controls the conditions in his store."



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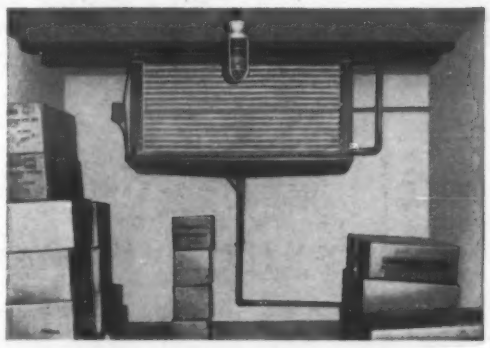

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ATLANTA 1, GEORGIA

From the Manufacturers

Service Bulletins

In this department, the NEWS presents significant items from information that has been published in the Service and Technical bulletins of manufacturers.

We have found a few instances of restricted liquid line drier on Model 1203-4 condensing units. The drier on these units is located inside the receiver shell and, when this restriction takes place, an excessive pressure drop on the liquid refrigerant flow out of the receiver takes place.

This operating fault is just a little difficult to diagnose on the 1203-4, mainly because of the location where head pressure is checked. Head pressure on this unit is taken at the charging connection of the receiver liquid line shut-off valve.

Under normal operation, the pressure at this point is from 6 to 12 lbs lower than the head pressure directly at the compressor discharge. Now, if you have a restricted drier inside the receiver you may have an indication of normal head pressure while actually the head pressure at the compressor could be excessively high.

Usually this fault results in vapor bubbles in the liquid line sight glass which is interpreted as an indication of a short refrigerant charge. Adding refrigerant may clear the sight glass but would result in a still additional increase in head pressure. This will result in excessive compressor loading and inefficient operation.

One way to diagnose this operating fault is by checking compressor amperage. There are two variables that also affect amperage. (1) Ambient temperature; (2) Evaporator loading. The following chart shows the amperage of a normally loaded, 230-volt single-phase compressor at different voltage and at different ambient conditions. This chart should help you determine if an operating fault of a 1203-4 is the result of a restricted liquid line drier. If a restricted drier is found, it will, of course, be necessary to replace the complete liquid receiver assembly since the drier is an internal part of the receiver.

Deg. F. Ambient	Voltage 207	230	253
75	17.4	16.2	15.0
85	18.6	17.2	16.0
95	20.0	18.2	16.8
105	21.2	19.2	17.7
115	22.5	20.1	18.6

CHRYSLER AIRTEMP

On a Note of Optimism

400 Noland Salesmen Gather In Richmond For Market Report and Product Seminars

RICHMOND, Va. — The 400-man sales staff of Noland Co., independent distributor of mechanical equipment, assembled here for a one-day "brush-up" meeting, was told that business is good and will get better.

Top executives of the company, addressing salesmen from Noland's 37 branches in nine southeastern states and the District of Columbia, quoted figures and showed charts to prove the recession ended three months ago.

REPORTS FROM COMPANY PRODUCT MANAGERS formed an important part of Noland Co.'s recent company-wide sales meeting. Here M. Gardner Smith, executive vice president-marketing, addresses 400-man sales force while the merchandising managers C. V. Hale (refrigeration), E. M. Myers (electrical), Howard Hinson (industrial), and Gordon Pearson (plumbing and heating) listen.

'Customer Is King Again'

Reporting on current market conditions, Lloyd U. Noland, Jr., the company's board chairman, said it was apparent to the industry that the "customer is king again."

Moreover, added Noland, there are clear signs that capturing the lead in this new customer climate will be a matter of selling quality, not price. "The conditions are right for it again—and they are getting righter every day," said Noland.

The principal reason for holding such a large scale rally of Noland men at this time, said M. Gardner Smith, executive vice president-marketing, was the rapid upward movement that the economy has shown, with consequent new conditions to be faced in the selling field.

Smith said that the recent recession, for business generally, was "the shortest and mildest adjustment since World War II."

Statistics from government sources, plus figures from Noland's own economist consultants, show that durable goods—with which Noland is closely associated — had to weather a 13-month decline totaling 15%, while non-durables suffered only about 5% for some seven months.

"So far as our part of the economy is concerned," Smith said, "it was a real recession and I think we're all fortunate to have weathered the storm as well as we did."

The same note of solid optimism, supported by facts from the several fields in which Noland operates — plumbing, heating, refrigeration, electrical, industrial, and machine tools—was given major emphasis by Noland and by John E. Sommers, Noland president.

Steady Rise Since March

Highlight of the encouraging figures presented to the group by Sommers was a steady rise in Noland sales which, starting in March, has already overcome a January-February deficit to put tools ahead of 1960.

Private-dwelling and apartment construction is on the rise, the Noland executives told their sales force, non-residential construction in 1961 will appreciably exceed last year's total, and almost all categories of government building expenditures are well ahead of 1960 and undoubtedly will stay that way.

Product Managers Hold Seminars

Managers and salesmen from the company's four product divisions participated in intensive seminars during the sales conference at meetings conducted by the company's four product managers: Gordon Pearson, plumbing and heating; C. V. Hale, refrigeration; E. M. Myers, electrical; and Howard Hinson, industrial and machine tool.

The results of these meetings were then reported to the general conference.

More than a dozen of Noland Co.'s 37 branches were cited for outstanding quota performances in the year ended May 31. And, during the session, managers of branch product departments and salesmen were also given awards for their sales and profit gains.

Noland salesmen found a Civil War Centennial atmosphere awaiting them at Richmond's John Marshall hotel. Each was given a Confederate campaign hat, each branch location in the meeting room was designated by a military guidon, and merit awards for sales performances took the form of commendation ribbons.

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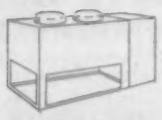
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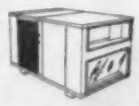
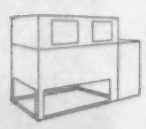

PACKAGED HEAT PUMPS

ELEC. DUCT HEATERS


COMMERCIAL HEAT PUMPS

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Commercial Refrigeration—$1.50 each. ☐ C-1 ☐ C-2 ☐ C-3

- ☐ Handbook of Instrumentation and Controls—$15

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CUBE FILTERS are located inside air intake units at side of plant. In first stage of industrial gas manufacture fresh air is drawn through filters by multi-stage reciprocating compressor. Large air intake unit (left), is divided into two segments, each of which has one bank of nine filters (three rows of three).

'Cube' Filters Using 'Dynel' Modacrylic Fiber Serve Industrial Gas Plant

ASHTABULA, Ohio—Air filtration problems at the Linde Co. Div., Union Carbide Co. plant here which makes industrial gases, seem to have been solved with the installation of "Cube" filters using "Dynel" modacrylic fiber as the filter medium, state division officials.

Much of the problem with other types of filter resulted from heavy pulsations resulting from reciprocating compressor operations. In the production of industrial gases, fresh air is drawn into a multi-stage reciprocating compressor for the purpose of pressurizing it to 2,000 lbs per sq in. Fresh air enters through an air intake unit in which the filter bank is contained.

In addition to the pulsation problem (which beat the former filter media against a retaining screen causing rapid deterioriation), severe winter weather conditions made it necessary to install a hood, which reduced efficiency.

The cube-type "Ulok" filters now installed in five air intake units are a product of Union Carbide Development Co. These filters are made up of three components: a disposable, 2-in. thick filter medium shaped like an open box; a rust-resistant retainer frame that fits inside the medium to hold it rigid; and a wire basket into which the medium fits.

The "Dynel" filter medium is a synthetic moisture-proof fiber with a highly irregular cross-section and rough surface that tends to trap and hold large quantities of dirt.

The air stream carries dirt into the cube and onto the front surface of the downstream face of the filter. As dirt builds up on the downstream face, air flow is shunted to the large filtering area of the four sides. Thus, it is claimed, filtering efficiency and low pressure drop is maintained even after large quantities of dirt have been collected.

The three-piece filter assembly is supported by a metal holding frame permanently mounted in the filter bank. To combat the problem of excessive compressor pulsation in the Linde plant installation, a new retainer was fabricated which incorporated a special 2-in. mesh and rib design, and this eliminated the problem of rapid deterioration of the filters caused by heavy compressor pulsations.

Tests after several months of use revealed a notable increase in filter efficiency, it was stated. As a check beyond the usual methods, the first stage suction and discharge valves of the 1,750-hp Worthington compressor were removed and compared against a similar compressor, which had accumlated the same number of operating days with another type of filter.

The compressor with the suction valves serviced by the cube filter had appreciably less carbon deposits than the similar unit operating with the other filter, which showed sludge accumulations and a large amount of carbon deposits.

Also, substantial maintenance cost reductions seem likely, since the former type of filter had to be cleaned at least every 30 days, and the Ulok filters were rendering good service without having been cleaned after six months of operation.

Engineer-Contractor Relations--

(Continued from Page 1, Col. 2)

struction.

With regard to specification clarity, CEC said that among other things, a guide aimed at elimination of jurisdictional differences is being prepared.

Other topics considered at the meeting were fair bidding procedures, "free" engineering, and ethical conduct in the construction industry.

Co-chairmen on the joint committee are: for the CMSCI—George Roscoe, executive secretary of CMSCI; for the CEC—John Grice of the Consulting Engineers Council of Maryland.

A major goal of the committee is the extension and amplification of cooperation between CEC and CMSCI members and the promotion of increased understanding of joint contractor-engineer interests, it was explained.

Room Unit Sales--

(Continued from Page 1, Col. 3)

shipped in the like 1960 period.

Figures compiled by the Electrical League of Cleveland show that June room cooler shipments in Cuyahoga County by league member distributors rose to 1,728 from 1,328 in the previous June. However, first-half shipments declined to 4,187 from 4,887 in the same period of 1960.

Shipments of central residential systems in that area in June were off 5%, totaling 52 compared to 55 in the same month last year. For the first six months of 1961, shipments were down 38%, to 160 from 260 in the 1960 first half.

Kansas Gas & Electric reported that room air conditioner sales by retailers in June rose to 1,496 from 1,479 in the previous June. This brought sales for the first six months of 1961 to 2,669 units, a gain of 6.2% compared to the 2,513 sold in the same period of last year.

Sales of central-system air conditioners were down a bit in the KG&E area, dropping to 111 from 116 in June, 1960. However, sales for the first half of this year were up 20.7% from last year's first six months, totaling 362 against 300.

A report by Florida Power Corp. on heat pump and air conditioning sales in its area shows residential and commercial room units sales in June amounted to 2,129, up 52.7% from the 1,394 sold in the same month of 1960.

Total heat pump and air conditioning sales rose to 2,724, a gain of 39.4% compared to the June, 1960, figure of 1,954. For the first half of 1961, sales totaled 7,652 units, against 6,645 a year earlier.

The report showed that tons added in June amounted to 5,040, up 40.6% from the previous June. Of the total, heat pumps accounted for 1,671 tons, up 62.9% from a year ago.

Electricity Use Rises To Record Level as Conditioner Use Rises

NEW YORK CITY—Use of electricity rose to record levels in the week ended July 22 as hot weather in many sections of the country spurred use of air conditioning.

In this area, for example, the thermometer soared past 90 last Wednesday for the sixth consecutive day. The heat has been accompanied by high humidity.

According to Edison Electric Institute, production of electricity in the July 22 week amounted to 15,829,000,000 kilowatt-hours, 6.7% higher than a year ago. The previous weekly record was 15,641,000,000 kwh in the week ended Jan. 28.

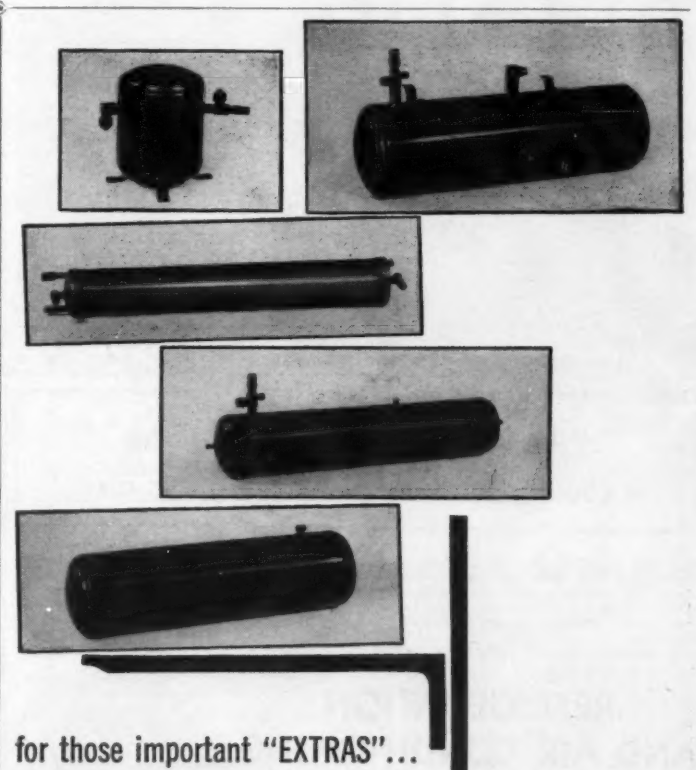
Dunham-Bush Wholesaler Marketing Plan

JACK ANSON AND MAT MOHILE (behind counter) principals of Manchester Pipe & Supply Co., Manchester, Conn. express approval of new wholesaler marketing program to Dunham-Bush vice president of heating sales, Walter S. Browning. The Manchester firm recently joined the plan that gives recognized wholesalers exclusive sales of Dunham-Bush lines of hot water specialties, centrifugal pumps and 4 and 6-in. steam converters, as well as an opportunity to handle other Dunham-Bush air conditioning and heating products. "Announced in February, the plan that restricts sales to wholesalers only has deluged us with wholesaler acceptance," Browning said.

16,000 COMPRESSORS ANALYZED

Tech Center has obtained IBM analysis of the performance of 16,000 compressors from one of the country's largest food chains, which operates over 800 stores. The continual analysis of service requirements of its refrigeration equipment has resulted in so much data that "We have answers we don't know the questions to yet," states a chain executive.

This exclusive owner's report will appear in a coming issue of the NEWS.



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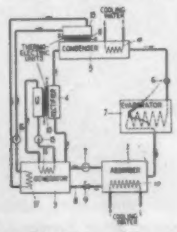
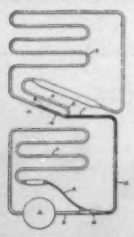
PATENTS *Week of April 18*

2,979,923. REFRIGERATING SYSTEMS. Harry Bury, Ickenham, England, assignor to The General Electric Co., Ltd., Kingsway, London, England.



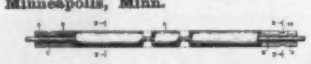
1. In combination with a refrigerating system of the absorption type including a generator in which heat is imparted to a working refrigerant, a thermocouple assembly connected to provide hot junctions and cold junctions, and means for supplying electric current to the thermocouples of said assembly, said hot junctions being in heat exchange relation with said generator and said cold junctions being in heat exchange relation with a part of said system to which heat is rejected by the refrigerant . . .

2,979,924. REFRIGERATING SYSTEM COMPOSED OF DISSIMILAR METALS. Stephen Balogh, Louisville, Ky., assignor to General Electric Co., a corporation of New York.



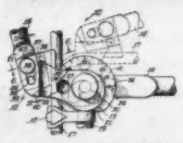
1. Refrigerant flow control means for use in a refrigerating system to connect an aluminum evaporator having tubular inlet and outlet ends to a condensing unit; said refrigerant flow conduit means comprising a copper capillary tube for conducting liquid refrigerant from said condensing unit to said evaporator and an aluminum suction conduit for returning vaporized refrigerant to said condensing unit, said suction conduit comprising a main aluminum tube having a reduced end portion adapted to extend into the inlet end of said evaporator and an aluminum side arm extending from said main tube for connection to the outlet end of said evaporator . . .

2,979,953. AMBIENT TEMPERATURE COMPENSATING MEANS FOR CAPILLARY TUBING. Justin O. Johnson, Jr., Philadelphia, and Konrad H. Stokes, Ambler, Pa., assignors to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn.



1. An ambient temperature compensating means for retaining the volume expansion of the space between the inside wall of a metallic capillary tube having one co-efficient of expansion and the outside wall of an elongated tensioned wire of a lower coefficient of expansion within said tube equal to the cubical expansion of a fluid fill within said space between said two walls comprising, a clamping means at each end of said tube to retain said tensioned wire in a taut condition . . .

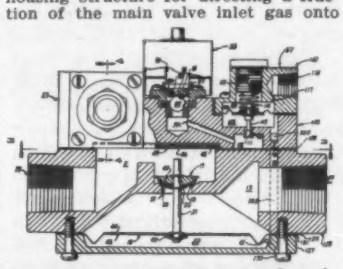
2,979,976. PLIER-TYPE TUBE BENDING TOOL. George E. Franck, Riverside, Ill., assignor to Imperial-Eastman Corp., a corporation of Illinois.



12. In a tube bender having a mandrel with a peripheral bending groove concentric of an axis, bending means comprising a block movable about said axis and confronting the bending groove of the mandrel to press a tube into said bending groove, an elongated handle, and means movably connecting the handle to the block including means positioning the handle in either of two preselected angularly related positions relative to said block . . .

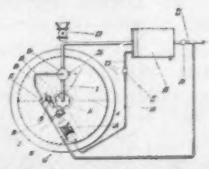
2,980,133. MULTI-PURPOSE DIAPHRAGM GAS VALVE. Lemuel Browning Cooper, San Carlos, Calif., assignor, by mesne assignments to American Radiator & Standard Sanitary Corp., New York, N. Y.

1. The combination comprising a main gas valve including a housing structure and a pressure responsive member therein; a unitary control valve structure carried entirely by said housing structure for directing a fraction of the main valve inlet gas onto



the pressure responsive member to control the main valve outlet pressure; said unitary control valve structure comprising a pilot flame-responsive valve means acting to hold the control circuit open, a manual reset means operative to move the flame-responsive valve means to an open position, a thermo-statistically - operated valve means in series with the pilot flame-responsive valve means for opening and closing the control valve structure in response to sensed temperature variations, and automatic pressure regulating valve means in series with the thermostatically-operated valve means for controlling the pressure of the control valve gas directed onto the pressure responsive member . . .

2,980,207. AIR FILTERS. Robert W. Allen, Hazel Grove, England, assignor to Henry Simon, Ltd., Stockport, England, a British company.

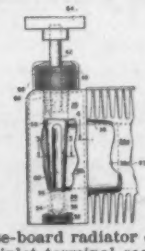


1. An air filter of the type comprising porous elements arranged in sections which elements are cleaned by reverse-to-normal aid flow, incorporating automatic means for the continuous cyclical cleaning of the elements in all sections, said automatic means comprising a source of comparatively high pressure air, an air storage reservoir, a pipe line connecting said source to said reservoir . . .

2,980,208. FILTER ELEMENT FOR EXTREMELY FINE DUST. Gerhard Max Neumann, Berlin-Friedenau, Germany, assignor to Delbag-Luftfilter G.m.b.H., Berlin-Halensee, Germany, a limited liability company of Germany.

1. A filter element to be fitted in frames of air filters for separating extremely fine dust, comprising a single rectangular sheet of filter material creased first lengthwise zig-zag fashion to divide the sheet into a plurality of equal folds, then creased transversely along a plurality of equally spaced fold lines to define panels of equal length, said panels then folded transversely accordion-fashion each through 90° from their initial position at intervals, said panels forming after the transverse folding a plurality of opposed convex edges extending the length of said panels . . .

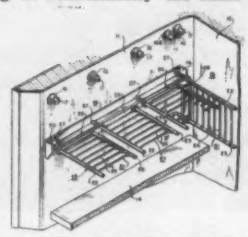
2,980,402. BASE-BOARD RADIATORS. Allan W. Lundstrum, c/o Ohio Fuel Gas Co., 99 N. Front St., Columbus, Ohio.



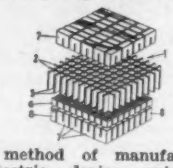
1. A base-board radiator comprising: a die cast inlet terminal section having a tapered male connector part and having valve means including a tapered valve member and a tapered valve seat therefor, for regulating the flow of heated fluid to the base-board radiator; a die cast outlet terminal section for discharging fluid from the base-board radiator, said outlet terminal having a tapered female connector part; and a plurality of finned radiator sections coupled together in end-to-end relation and to said inlet and outlet terminal sections, each said radiator section including die cast top, bottom. . . .

2,980,483. ADJUSTABLE SHELF STRUCTURE FOR REFRIGERATOR CABINET OR THE LIKE. Pearl C. Davis, Columbus, Ohio, assignor to Westinghouse Electric Corp., East Pittsburgh, Pa.

1. In a cabinet having side and rear walls and an opening at the front thereof, means providing upper and lower vertically spaced, horizontal rows of supports on each of said side walls, the rows on one of said side walls being at substantially the same elevations as the respective rows on the other side wall, and a shelf adapted to rest on and span the distance between opposite supports, said shelf comprising a plurality of substantially rigid sections hingedly connected in series with the hinge axes of said sections extending normal to the side walls of said cabinet. . . .

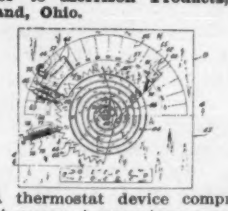


2,980,746. MANUFACTURE OF THERMOELECTRIC DEVICES. Roy Claydon, Pinchley, London, England, assignor to The General Electric Co., Ltd., London, England.



1. A method of manufacturing a thermoelectric device, said method comprising assembling a plurality of thermoelectric elements to form a rectangular array of alternately disposed dissimilar elements, the elements being assembled in a jig, said jig comprising a plurality of intersecting strips forming a rectangular array of cells open at their tops and bottoms, placing in contact with said elements so as to connect the elements in series a plurality of U-shaped rigid metallic bridging members whose ends are fitted into adjacent cells to bridge adjacent elements with the intermediate portions thereof bridging the strips supporting said adjacent cells, disposing said members alternately on opposite sides of the array, coating contacting surfaces of the elements and the members with soldering material, and then heating the assembly to solder the members to the elements.

2,980,780. THERMOSTAT DEVICE. Peter Kardos, Cleveland Heights, Ohio, assignor to Morrison Products, Inc., Cleveland, Ohio.



1. A thermostat device comprising, support means, temperature responsive means responsive to ambient air temperature and having a held portion and a movable portion, means providing a reference point on said support means, said movable portion being movable by said responsive means in one direction relative to said reference

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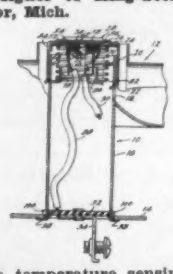
point in response to an increase in said ambient temperature and movable in the opposite direction in response to a decrease in said ambient temperature, a pair of electric switches associated with said responsive means, one of said switches being actuatable to a closed condition in response to movement of said movable portion in said one direction away from said reference point and the other of said switches being actuatable to a closed condition in response to movement of said movable portion away from said reference point in said opposite direction. . . .

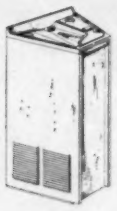
2,980,875. THERMO-RESPONSIVE DEVICE. Emil E. Sivacek, Ann Arbor, Mich., assignor to King-Seeley Corp., Ann Arbor, Mich.



1. In a temperature sensing device, a pair of substantially parallel metal plates one of which has an aperture therein, a shank secured to the other one of said plates and extending through and beyond the aperture in said one plate, a shoulder on one of said plates having a diameter greater than the diameter of said shank and greater than the diameter of said aperture; and an insulated wire having a substantial temperature coefficient of resistance sandwiched between said plates and coiled around said shoulder, and means for securing said plates together.

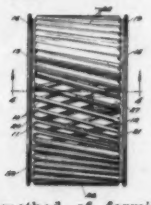
DESIGNS

190,147. WATER COOLER. Robert R. Fink, Chicago, Ill., assignor to General Electric Co., a corporation of New York.



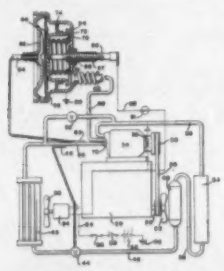
Week of April 25

2,980,990. SPIRAL BLOWER WHEEL. Lowell E. Sprouse, Columbus, Ind., assignor to Vernco Corp., Columbus, Ind.



1. The method of forming a high efficiency blower wheel which comprises slitting a strip on concave lines thereacross between land portions along the strip edges and forming concave blades out of the strip portion lying between the slits, each blade being concave along one slit edge and convex along its other slit edge with a constant distance between said edges linearly of the strip; rolling the strip into cylindrical wheel shape with the blade concave edges inside and the convex edges outside.

2,981,076. REFRIGERATING APPARATUS. Richard S. Gaugler, Dayton, Earl S. Schlotterbeck, Lewisburg, and Raymond F. Schultz, Dayton, Ohio, assignors to General Motors Corporation, Detroit.

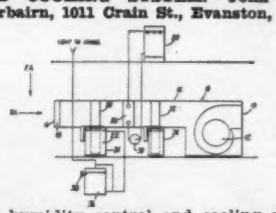


1. Refrigerating apparatus containing a refrigerant and including a compressor, a condenser connected to the compressor, a flow control device and an evaporator connected to said condensor, a suction line connecting said evaporator and said compressor, means for driving said compressor, an electrically operated clutch connecting said driving means and said compressor, a fuse connected in electrical series circuit with and having one terminal connected to one terminal of said electrically operated clutch, a source of electrical energy connected to a second terminal of said fuse and a second terminal of said electrical device . . .

2,981,075. APPARATUS AND METHOD FOR MANUFACTURING SOFT ICE CREAM. Henry C. Duke and Gene S. Duke, both of 623 15th Ave., East Moline, Ill.

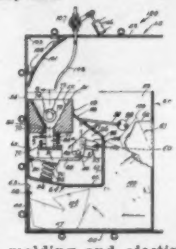
3. Apparatus for manufacturing soft ice cream comprising a freezing machine, a mix receptacle and a pump operatively connected, said pump being normally adapted to suction the mix from the mix receptacle to the freezing machine, and a vented cover connected with said pump for diverting the mix from the freezing machine and maintaining a predetermined pressure within the latter, when the freezing machine is full.

2,981,078. HUMIDITY CONTROL AND COOLING SYSTEM. John K. Fairbairn, 1011 Crain St., Evanston, Ill.



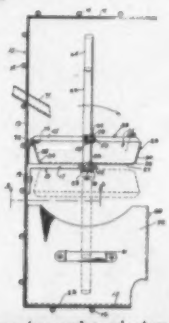
A humidity control and cooling system comprising in combination a conduit having an inlet and an outlet, a first foraminous wheel rotatably mounted partially within said conduit and adjacent said inlet, means holding hygroscopic solution, said wheel extending partially into said hygroscopic solution, boiler means connected to said means holding hygroscopic solution to regenerate the solution and dissipate water collected by said foraminous wheel, a cooling coil in said conduit on the side of said wheel opposite said inlet for serially treating air dehumidified by said wheel to remove heat of condensation therefrom . . .

2,981,079. ICE BODY MAKERS AND EJECTORS. Robert W. Fink, Evansville, Ind., assignor to Whirlpool Corp., Evansville, Ind.



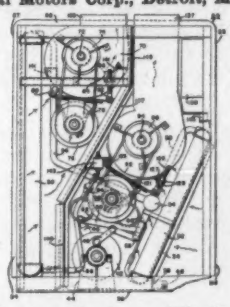
1. Ice molding and ejecting apparatus, comprising: a mold having a plurality of upwardly opening frusto-conical cavities; means for ejecting ice bodies formed in said cavities comprising a plurality of plungers associated one each with said cavities, each plunger being movable through and normally closing the lower, small diameter end of the associated cavity; a plurality of elements associated one each with the respective plungers for delivering an impact force to each plunger causing the plunger to break the ice body free of the wall of the cavity and eject it upwardly through the upper . . .

2,981,080. ICE CUBE EJECTORS. Alan J. Koch, Evansville, Ind., assignor to Whirlpool Corp., a corporation of Delaware.



1. In an ice cube ejector assembly, the combination of a support having a wall, a rectangular ice tray carried by said wall, and having a bottom secured to a shaft extending longitudinally of the bottom, generally midway between the lateral edges of the tray, a pair of shelf brackets carried by said wall, each shelf bracket having a bearing at its end rotatably supporting the ends of said shaft, a handle lever pivoted transversely on the forward end of said shaft and extending upwardly in front of said tray, a connecting strip pivotally connected to said lever and extending horizontally over said ice tray, and a multiplicity of transverse inclined webs located in said tray and dividing the tray into transversely extending ice cube pockets . . .

2,981,083. AIR CONDITIONER. James L. Miller, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich.

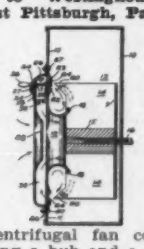


1. A compact air conditioning unit including a box shaped cabinet having outdoor and room air inlets in opposite faces of the cabinet, a thin outdoor coil of extensive area located in series with and adjacent to and being substantially coextensive with the outdoor air inlet and an indoor coil located in series with the room air inlet, a compressor and a refrigerant expansion device within the lower portion of said cabinet connecting said coils in operative refrigerant circuit . . .

2,981,367. SNAP FILTER FRAME. Verner E. Sprouse, Columbus, Ind., assignor to Vernco Corp., Columbus, Ind., a corporation of Indiana.

1. The combination with a compressible, resilient filter medium, of a holding frame comprising medium encircling angle members each consisting of a leg defining an area within which said medium may be received, and a foot extending from the leg, upon which foot the medium bears by a marginal portion, a plurality of barbs each spaced apart from the others around said foot and extending therefrom diagonally toward said leg . . .

2,981,461. CENTRIFUGAL FANS. James D. Murphy, Framingham, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa.



1. A centrifugal fan comprising a rotor having a hub and a backplate, a plurality of radial blades supported by said hub and backplate, said blades having back edges at said backplate and having front edges opposite said back edges which are unenclosed from their roots to their tips, said fan having a casing around said rotor, said casing having an inner inlet sheet with an exial inlet passage, said casing having an outer sheet with an axial inlet opening . . .

(To Be Continued)

You Asked About It

Edited by Hugh T. Mahar

Formerly limited to things technical, this column has extended its scope to reflect the wide range of reader service performed by the NEWS. From our files, from our editorial staff, from experts in the field, we will draw the information necessary to answer reader questions of general interest whether they be on engineering or merchandising, on service or accounting.

Q. Can you tell us the names of manufacturers of freeze-drying equipment?

PR—Iowa

A. The following companies are among those who manufacture freeze-drying equipment of some sort:

American Sterilizer Co., 2400 W. 23rd St., Erie, Pa.

Chain Belt Co., 4701 W. Greenfield Ave., Milwaukee.

Food Machinery & Cable Corp., Central Engineering Laboratories, San Jose, Calif.

MRC Equipment Corp., 160 Charlemont St., Newton Highlands, Mass.

F. J. Stokes Co., 5500 Tabor Rd., Philadelphia 20.

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Absolutely Dependable!

THE WATSCO GOLD SEAL **LINE TAP VALVE**

Instantly pierces tubing ...to provide a permanent port for charging, discharging, and testing without refrigerant loss!

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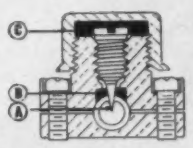
- Small, compact, low cost!
- Taps into any refrigeration line from 3/16" OD to 5/8" OD.
- Secured to tube from the top by two Phillips head screws for greater convenience.
- Engineered to fit respective size line – can't bend or crimp tubing.
- May be installed without refrigerant loss even while unit is operating.

PERFECT "THREE POINT" SEALING



A Taper of needle forms first seal

B Neoprene seat forms second seal

C Seal cap forms third precautionary seal

Use with Gold Seal Swivel Control Valve CV-1G or CV-2G.

For additional information, see your wholesaler or write Dept. N-73

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FREE PARKING AND FAST COUNTER SERVICE AT THESE 4 BIG WAREHOUSES

Flexible Tubing Forms 9-Man Advisory Group

GUILFORD, Conn.—A nine-man advisory council of flexible tubing air conditioning product agents has been formed by Flexible Tubing Corp. here.

The group, called the Thermaflex Agents' Advisory Council after the name of the flexible tubing they sell, will serve as a liaison between the company's 70 Thermaflex agents and its management.

In announcing the council's formation, Stephen K. Hawkins, national sales manager-general products, noted that "the council will help promote harmony and unity between our agents and sales management." The council will work almost exclusively by mail, either by the members' initiative or by requests sent out from the corporation.

According to Hawkins, "The contacts will result in decisive action by the company concerning new products, new markets, market trends, new literature, and pricing policies. In short, it will help keep us informed of how we can improve our products and service."

Members of the council are: George F. Bertrand, George F. Bertrand Co., Philadelphia; W. M. Carroll, W. M. Carroll & Co., Albuquerque, N. M.; G. Ross Leaver, Control & Metering, Ltd., Toronto, Ontario, Can.; D. J. Crawley, Crawley-Gorbandt Co., Atlanta; H. D. Grant, H. D. Grant Co., Houston, Texas; Harold Anderson, The Jay Co., Minneapolis; Herman L. Jorban, Manufacturers' Sales Co., Kansas City, Mo.; Dale A. Rupert, Rupert-Ryan Co., Cleveland, and J. D. Kniveton, Norman S. Wright & Co., San Francisco.

Gibson Names Farrell--

(Continued from Page 1, Col. 1)

for York Div., Borg-Warner Corp. Before joining York, he was eastern sales manager, national sales manager, and merchandise manager for Crosley. Prior to that time he held several important executive positions with major distributing firms. His appliance experience dates from 1930.

RACCA Names--

(Continued from Page 1, Col. 3)

membership sales director of the Chamber of Commerce of the U.S.; assistant executive director of the Washington, D. C. Visitors and Convention Bureau; and assistant director of the Mental Hospital Services of the American Psychiatric Assn.

Koach was graduated from George Washington university and did graduate work in public relations at American university. He currently is serving on the board of directors of the Association Executives Forum of Chicago and as a member of the Convention Liason Committee of the American Society of Association Executives. He also serves on the faculty for association management studies at Michigan State university.

Manufacturer 'Jumps To the Bait,' Calls Out the BBB

NEW YORK CITY—A flyer advertisement by a Long Island appliance firm promoting a certain make of air conditioner made the manufacturer of the unit justifiably annoyed, according to the Better Business Bureau of Metropolitan New York.

The manufacturer complained that the advertiser didn't have the air conditioner available for sale. Acting on the complaint, the Long Island BBB dispatched a shopper to the store. The shopper verified the complaint.

Subsequently, the BBB became annoyed because the firm made an effort to switch the shopper to other brands, the BBB said. The bureau said the firm's offer was stopped when the BBB claimed it "had all earmarks of a 'bait' promotion."

Plastics Foams To Be Discussed at Buffalo Meeting

BUFFALO — Plastics foams will be discussed extensively at an SPE regional technical conference in Buffalo on Oct. 5, it was announced by the Society of Plastics Engineers.

An expansive technical program of 17 papers, divided into two concurrent sessions on rigid and flexible foams, will cover new technical developments in this rapidly moving segment of the industry, it was pointed out. Sponsored by the society's Buffalo Section, the conference will be held at the Hotel Lafayette.

The technical program will feature papers on polypropylene, polyethylene, urethane, epoxy, vinyl, silicone, and polystyrene foams, and incorporated in each of the four technical sessions will be a concluding panel discussion and opportunity for questions from RETEC registrants.

Advance registration fee is $10, while registration at the meeting site will be $12. Requests for further information and advance registrations should be directed to Andrew J. Hammerl, RETEC Registration Chairman, Durez Plastic Div., North Tonawanda, N. Y.

Shreveport Contractors Elect Officers

SHREVEPORT, La.—At the annual meeting of the Plumbing & Air Conditioning Contractors Association, officers for the coming year were elected.

They are W. M. Hamm, Jr., president; Wayne L. Jarvis, vice president; R. W. Payne, treasurer; and B. B. Robertson, secretary.

Retiring President R. F. Fitzgerald, Robin M. Hood, and John R. Beckett were elected to the board of directors. L. L. Stephenson, Jr., was chosen to represent the group on the board of directors of the Louisiana Association of Plumbing, Heating & Mechanical Contractors.

Hamm, who is manager of Shreveport Plumbing Co., called for a united effort by all members of the industry to support a strong association program designed to cooperate with state and local building authorities, the FHA, architects, and general contractors in up-grading service and installation work.

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Only 25¢ each.

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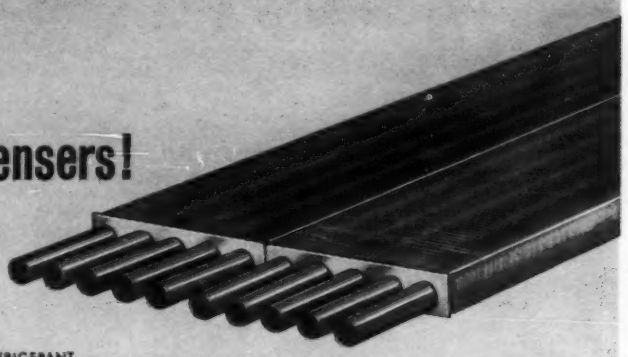

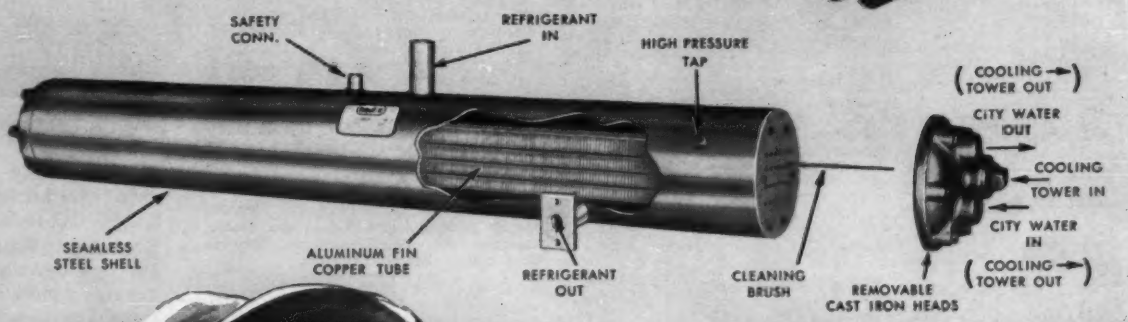

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IT'S EXTENDED
ALUMINUM FIN SURFACE

And this superior construction—exclusive with HEAT-X—makes a big difference . . . makes possible

- Greater heat transfer efficiency.
- Better gas distribution across the cooling surface.

These heavy duty, high capacity condensers are specifically designed to simplify the mechanical cleaning necessary in areas where poor water conditions exist.

Internal condenser rigidity is assured by combining five tubes to a "bank". These "banks" are securely bracketed internally to provide a rigid, vibration-free bundle.

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